The health of young children and the foundation of British children's hospitals, c.1830 –1860

by

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Abstract

Between the years 1852 and 1860 six voluntary hospitals were opened in Great Britain to provide medical care for children who would previously have been considered too young to be admitted to hospital. This thesis argues that the process was shaped by the public health movement which was ascendant at that time.

The literature review shows that while historians of nineteenth-century childhood have been aware that child health was a problem, especially for working-class children, they have tended to view this through the prism of industrial and urban history, and there is little work available relating specifically to the provision of health care for younger children.

Chapters two and three demonstrate the emergence of a new understanding of the nature of childhood which came about as a result of the great inquiries into child labour, the health of towns, and the condition of the labouring classes, and the impact of the emerging science of statistics. At a time of crisis in traditional British medicine, the new approaches combined with French clinical and German laboratory techniques to open British physicians to the possibility of working with young children as a serious proposition for the first time.

Chapters four to six follow the various ways in which six children's hospitals were opened in London, Norwich, Liverpool, Manchester, and Edinburgh. Influences which are analysed include the desire to rectify the acknowledged ignorance among physicians concerning children's diseases, the recognition of environmental management as a fruitful means for improving children's health, and a new willingness to emulate Continental practices.

This thesis departs from the existing historiography in challenging the underlying assumption as to the operating model of a hospital. Histories of children's hospitals are written in terms of the extent to which they succeeded in applying the allopathic model of health, with the administration of medicines and surgical procedures at the centre,

however ineffectually. What actually distinguished the new institutions was their emphasis on promoting healing not by manipulating children's bodies but, drawing on the insights of the public health movement, by providing a therapeutic environment.

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Finally, of course, there are my supervisors, Dr. Steve Cunningham and Dr. Keith Vernon. Keith in particular has seen me through some arid patches, and has proved to be understanding when work commitments have meant that I have been both elusive and non-productive. Well, Keith, here it is at last.

List of Abbreviations

DQJMS = Dublin Quarterly Journal of Medical Science

GOSH = the Hospital for Sick Children at Great Ormond Street, London

GRO = the General Register Office, London

JLI = Jenny Lind Infirmary (Norwich)

Translations

Unless otherwise indicated, all translations from the German are by the author of this thesis.

Introduction

"The development of the children's hospital has received systematic appraisal from neither historians of pediatrics nor historians of medicine and medical institutions. In particular, we lack any in-depth studies on the motives which have spurred both medicine and wider society to establish this distinctive institution."[1]

Seidler wrote these words in 1989, and since then there has been just one major contribution to the field, that of Lomax.[2] Seidler concluded that the new hospitals had been introduced both for the protection of children and also for their exploitation by the medical profession 'in the service of its new scientific orientation', and that their creation reflected the growing interest of society in its children as social resources.[3] The purpose of this investigation is not only to study the motives which 'spurred both medicine and wider society to establish this distinctive institution', but to offer a fresh explanation not only as to why such hospitals were created, but why they were opened at just the time they were.

A brief study of the British voluntary hospital movement in the early- to mid-nineteenth century will show, firstly, that children younger than the age of six or seven years were not generally welcome as patients in these institutions,[4] and that, secondly, there was a series of hospitals opened especially for young children in the decade between 1850 and 1860. Six institutions have been chosen for this study, representing the pioneering phase in the establishment of children's hospitals in Great Britain. The selection has been made to demonstrate the way in which early childhood was coming to be seen as a distinct developmental phase in its own right. Hospitals such as St. Mary's in

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[1] Seidler, E. "An historical survey of children's hospitals." in Granshaw, L. & Porter, R. (eds) *The Hospital in History.* (London: Routledge, 1989): 181-197.
[2] Lomax, E.M.R. *Small and Special: The Development of Hospitals for Children in Victorian Britain.* "Medical History" Supplement No. 16. (London: Wellcome Institute for the History of Medicine, 1996).
[3] Seidler, "An historical survey": 195.
[4] For example Liverpool (7 years) McLoughlin, G. *A Short History of the First Liverpool Infirmary, 1749-1824.* (London: Phillimore1978): 73-4; Leeds (6 years) Anning, S.T. *The General Infirmary at Leeds, vol 1.* (Edinburgh & London: E. & S. Livingstone, 1963): 81; and Norwich (6 years) Eade, P. *The Norfolk and Norwich Hospital, 1770-1900.* (London: Jarrold & Sons, 1900): 217.

Manchester had provided care for women and children, reflecting the belief that young children's health could only be evaluated and treated in conjunction with that of their mothers.[5] Whilst hospitals for women and children, such as that in Leeds (1853) would continue to be founded,[6] the establishments chosen for this study shared two distinguishing innovations: they treated young children as individuals in their own right and with their own specific care needs, rather than as adjuncts of their mothers; and it will be shown that they offered the medical care, including, in many cases, care for infectious conditions, which had hitherto been refused them in the voluntary hospital system. The list therefore begins with the Hospital for Sick Children at Great Ormond Street (GOSH), which opened in 1852 and will be shown to have been in many ways the hospital which set the intellectual fashion for others to emulate, and concludes with the Hospital for Sick Children which opened in Edinburgh in 1860 and will be seen to have consolidated a number of the innovations which characterised the first phase of children's hospitals. Within this timeframe there are four other hospitals to be considered: the Jenny Lind Hospital, in Norwich (1853); the Manchester Hospital and Dispensary for Sick Children (1854); the Cheetham Hill Road Clinical Hospital and Dispensary, Manchester (1856); and the Liverpool Infirmary for Children (1857).

This sudden change in attitudes towards the admission of children to hospital was all the more surprising given the wide range of reasons which had been expressed in both medical and lay circles as to why young children were not susceptible of medical attention and could not be expected to thrive in a hospital setting. Objectors kept returning to two problems in particular, one practical and the other conceptual: the practical one was that experience had shown that large-scale residential childcare institutions had experienced catastrophically high levels of mortality, and it was assumed that this must inevitably be the case; the conceptual one was that the dominant medical model of the time relied upon patient testimony in order for the

[5] Young, J.H. *St. Mary's Hospitals, Manchester, 1790-1963.* (Edinburgh & London: E. & S. Livingstone, 1964): 1-10.
[6] Carachi, R., Young, D., & Buyukunal, C. (eds) *A History of Surgical Paediatrics.* (London: World Scientific Publishing, 2007): 58.

physician to arrive at his diagnosis, and it was felt that younger children were incapable of giving this in a meaningful or reliable way.

This thesis considers the conceptual changes which made the opening of children's hospitals both possible and necessary. It then examines the extent to which these changes allowed the specific problems which had been identified within the field of child health to be addressed.. More specifically, the thesis seeks to answer four questions:

- What caused attitudes to change among a substantial part of the medical profession towards the possibility and desirability of providing medical treatment for young children in a hospital setting?
- Why was there a sudden burst of activity in providing for this care between c1850 and 1860?
- Why was a new model of hospital created for these children, rather than incorporating their care into that provided by existing institutions?
- What distinguished the care offered by these new hospitals?

The thesis will answer these questions over six chapters, aiming to illustrate an interlude in the history of medicine when medical models of health were replaced by an approach rooted in public health. Acknowledging their inability to treat disease successfully by manipulating children's bodies, physicians opted instead to manipulate children's environments. Children's hospitals would provide a refuge from the conditions which had made them sick, while adults would be taught how to care for them and to maintain domestic conditions which would allow their children to remain healthy once they returned.

The standard explanation for the emergence of the new children's hospitals is that, like other types of specialist hospital, they were created as a result of entrepreneurial activity by ambitious young doctors who were often social outsiders seeking to develop

unexploited specialist niches in the medical marketplace.[7] While it is true that some of the new hospitals' founders might be described as outsiders, two, for example, being foreign émigrés, it is the contention of this thesis that in other respects the institutions do not fit this pattern. The creation of hospitals which would admit and provide medical treatment for children who would previously have been considered too young was made possible by three broad intellectual innovations: firstly, a fresh understanding of the influence of environment on patterns of morbidity and mortality; secondly the new therapeutic possibilities which this knowledge created; and, finally, an emerging understanding of the qualitatively distinct nature of early childhood which, taken with the environmental approach to improving health, made the medical treatment of young children a real possibility.

The new hospitals could be distinguished from existing voluntary institutions by both their aims and their methods of operation. The most innovative were more concerned with engaging in research and education and providing relief for the families of the poor than in offering opportunities to develop lucrative private practice. Moreover, existing specialist practice revolved around the exercise of specialised surgical or medical techniques such as eye surgery or the treatment of venereal diseases. It will be seen that the model of health operated by the new children's hospitals was derived from the newly evolving discipline of public health – rather than manipulating the patient's body by means of surgery and drugs, they sought to manipulate the patient's environment by means of hygiene, diet, and routine. This would differ from the traditional idea of regimen by being systematic and based on evidence gathered from demographic statistics and in the clinic and the laboratory rather than prescribed on an individualised basis and based on patient testimony and the physician's own experience.

[7] Granshaw, L. '"Fame and fortune by means of brick and mortar": the medical profession and specialist hospitals in Britain, 1800-1948,' in Granshaw, L. & Porter, R. *The Hospital in History.* (London: Routledge, 1989): 199-221.

The thesis begins with a review of some relevant secondary literature. Just as the prohibition on children being admitted to voluntary hospitals was applied at a number of different ages, from six upwards, so the age at which children began employment varied, and many histories concentrate on the experiences of children over the age of around seven years.[8] It was for these very children, too young for admission to other hospitals and too young to work, that children's hospitals were created; some institutions accepted infants under two years, some turned them away. The health of infants was to a large extent managed alongside that of their mothers during the early-mid-nineteenth century, including for the purposes of admission to hospital, and to that extent falls outside the scope of this study. The single most comprehensive history of children's hospitals is that by Lomax, which puts forward a primarily economic explanation for the hospitals' foundation.[9]

Chapter 1 examines the broad historiography of childhood, and themes include changing interpretations of the meaning of childhood,[10] the experience of children in the era of industrialisation,[11] and interpretations of the consequences for children's

[8] For example Pinchbeck, I. & Hewitt, M. *Children in English Society: Vol. 2, From the Eighteenth Century to the Children Act, 1948.* (London: Routledge and Kegan Paul, 1973); Cruickshank, M. *Children and Industry: Child Health and Welfare in North-West Textile Towns in the Nineteenth Century.* (Manchester: Manchester University Press, 1981); Horn, P. *The Victorian Country Child.* (Kineton: The Roundwood Press, 1974); Horn, P. *The Victorian Town Child*. (Stroud: Sutton Publishing, 1997).

[9] Lomax, *Small and Special.*

[10] Cunningham, H. *Children and Childhood in Western Society since 1500.* (Harlow: Longman, 1995); DeMause, L. (ed.) *The History of Childhood.* (New York: Psychohistory Press, 1974); Hendrick, H. 'Constructions and Reconstructions of British Childhood: An Interpretative Survey, 1800 to the Present', in James, A. & Prout, A. (eds.) *Constructing and Reconstructing Childhood, 2nd ed.* (London, RoutledgeFalmer, 1997); Hendrick, H. *Children, Childhood, and English Society, 1880-1990.* (Cambridge: Cambridge University Press, 1997); Postman, N. *The Disappearance of Childhood.* (New York: Vintage Books, 1994, pbk); Rhodes, M. 'Uncovering the History of Childhood', in Mills, J & Mills, R. W. *Childhood Studies: A Reader in Perspectives of Childhood* (London: Routledge, 2000); Steedman, C. *Strange Dislocations: Childhood and the Idea of Human Interiority, 1780-1930.* (London: Virago, 1995); Walvin, J. *A Child's World: A Social History of English Childhood, 1800-1914.* (Harmondsworth: Penguin, 1982).

[11] Hopkins, E. *Childhood Transformed: Working-Class Children in Nineteenth-Century England.* (Manchester: Manchester University Press, 1994); three works by Pamela Horn; Humphries, J. *Childhood and Child Labour in the British Industrial Revolution*. (Cambridge: Cambridge University Press, 2010); Kirby, P. *Child Labour in Britain.* (Basingstoke: Palgrave Macmillan, 2003); Pinchbeck & Hewitt, *Children in English Society.*

health of industrialisation and urbanisation.[12] Of the three, the health of young children is the least-examined, and that almost entirely from the perspective of children working in factories.

So it is that although histories of childhood are widely available and varied, histories of child health are less so, and histories dealing with the health of young children are a positive rarity. Historians have tended to tackle the subject either in journal articles,[13] single book chapters,[14] or as part of a broader overview of an aspect of medical history.[15] These shorter accounts offer context and some description of the hospitals' principal activities. There is a limited number of academic theses: Barnes' account of the Pendlebury hospital is more descriptive than analytical,[16] while Lindsay's history of the Jenny Lind Infirmary is incidental to his main interest, which is children's nursing.[17] Institutional records and histories are particularly variable regarding the process preceding the creation of a hospital, and one problem with secondary material relating to this period is that histories of the more celebratory nature tend to be written with a view to justifying the present rather than explaining the past.[18]

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[12] Cruickshank, *Children and Industry.*

[13] Armstrong, George. (1777) ´A General Account of the Dispensary for the Infant Poor`, cited by Schneider, D. & Macey, S.M. ´Sick Babies, Few Choices: A Historical Geography of Medical Care and Facilities for Infants and Children`, in *FOCUS on Geography*, **48**, No. 2, Winter 2004: 9-17; Lindsay, B. 'Child Care in an infirmary in Norwich, 1854-1929', in Barona, J.L. & Cherry, S. (eds) (2005) *Health and Medicine in Rural Europe, 1850-1945.* (Valencia: Seminari d'estudis sobra la ciencia): 327-246; Rivett, G. 'Hospital Histories', in *Social History of Medicine*, (1993) 6 (3): 429-437.

[14] Franklin, A.W. 'Children's Hospitals', in Poynter, F.N.L. *The Evolution of Hospitals in Britain.* (London: Pitman Medical, 1964): 103-121; Seidler, "An historical survey of children's hospitals."

[15] Abel-Smith,B. *The Hospitals 1800-1948: A Study in Social Administration in England and Wales.* (London: Heinemann, 1964); Pickstone, J.V. *Medicine and Industrial Society: A History of Hospital Development in Manchester and its Region, 1752-1946.* (Manchester: Manchester University Press, 1985);

[16] Barnes, P.A. *Hospitals and Childhood: A Case Study of the Royal Manchester Children's Hospital "Pendlebury", 1829-1999.* (Manchester University: unpublished MPhil Thesis, 2001).

[17] Lindsay, B. *Who Cares? The Morphology of 'Caring' in Children's Hospitals, 1852-1950, with special reference to the Jenny Lind Hospital for Sick Children, Norwich.* (Norwich: University of East Anglia PhD Thesis, 2000).

[18] Birrell, G. *A Most Perfect Hospital: The Centenary of the Royal Hospital for Sick Children at Sciennes.*(Edinburgh: Edinburgh Sick Children's NHS Trust, 1995); Claydon, R. *The Story of the Royal Liverpool Children's Hospital: Alder Hey and Myrtle Street.* (London: Image Publications, 1991); Kosky, J. & Lunnon, R.J. *Great Ormond Street and the Story of Medicine.* (London: The Hospitals for Sick Children, 1991); Lindsay, B. *The Jenny*. (Norwich: Jenny Lind Hospital for Sick Children, 2004); McLoughlin, *A Short History of the First Liverpool Infirmary*; Mercer, D. & Mercer, G. *Children First and Always: a portrait of Great Ormond Street Hospital.* (London:

Chapter two begins with a re-examination of the great social investigations of the 1830s and 1840s. The range of sources used here includes revisiting reports of investigations such as the Children's Employment Commissions of 1833 and 1842, Chadwick's *Report on the Sanitary Condition of the Labouring Population of Great Britain,* and the Health of Towns Commissions. Much has been written about these, but relatively little has been said about such insights as they might offer into the health of young children – indeed, this is an area which is largely neglected across histories of childhood. Porter, for example, divides her attention between infant mortality and the health of schoolchildren.[19] The findings of these investigations, allied to the emergence of demography and the use of statistics, then began to be applied to investigating childhood systematically by men such as the factory inspector Leonard Horner, creating some of the first growth norms which helped to establish the concept of the standard or normal healthy child.[20] This would in time enable physicians to identify deviations from the norm, helping to create the possibility of objective diagnosis independent of patient testimony, however Hamlin shows that the medical professions were slow to understand and to make use of the implications of these revelations.[21] The findings of the investigators nevertheless helped to begin the process by which young children were seen as qualitatively different from older children and adults.

These investigations thus set the context for the creation of specialist hospitals for the medical care of young children by drawing the attention of the educated classes to the plight of the labouring classes, and to that of their children in particular. [22] The graphic

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Macdonald & Co., 1986); Robertson, E. *The Yorkhill Story.* (Glasgow: The Board of Management of Yorkhill and Associated Hospitals,1972).

[19] Porter, D. *Health, Civilisation, and the State: a history of public health from ancient to modern times.* (London: Routledge, 1999).

[20] Kirby, P. *Height, Urbanisation, and Living Conditions in the north of England, 1822-1837.* (Manchester: Department of History, University of Manchester, 1996).

[21] Hamlin, C. *Public Health and Social Justice in the Age of Chadwick: Britain, 1800-1854.* (Cambridge: Cambridge University Press, 1998).

[22] Chadwick, E. *The Sanitary Condition of the Labouring Population of Great Britain,*(Edinburgh: Edinburgh University Press, M.W. Flinn ed, 1965); Clay, J. 'Report on the Sanatory [sic] Condition of Preston', in Great Britain, Royal Commission for inquiring into the state of large towns and populous districts (1844) *First Report;* Royal Commission for inquiring into the state of large towns and populous districts. *Report.* (House of Commons Parliamentary Papers 1845 Vol XVIII pp1-91); HM Factories Enquiry Commissioners, *First Report of the Central Board of*

descriptions which these investigations produced were complemented by the detail of the emerging sciences of statistics and demography, which made clear the inequalities in levels of childhood morbidity and mortality and so demonstrated the environmental basis for much ill-health.[23] This coincided with a crisis in medicine, as established models of practice failed to manage the new epidemic diseases such as cholera and typhus which were affecting the industrial towns.[24] The shifting of medical opinion regarding the treatment of children can be traced in the reports, reviews, editorials, and correspondence columns of the medical press.[25] Reformers drew several conclusions: firstly, given the variations in mortality, it must be susceptible of amelioration, but by environmental rather than medical means; secondly, more knowledge was needed about the diseases of children; thirdly, sick children needed respite from the conditions that had made them sick in order to give them an opportunity to recover; fourthly, doctors needed to be educated in the diseases of childhood; and finally, families needed to be taught how to keep their children healthy. A hospital could provide a suitable location for co-ordinating many of these activities. Comparison with Continental models shows how they might have been more closely aligned to municipal or academic institutions.[26] Advances in surgical techniques that would take place over the next generation would change utterly the conception of a children's hospital,

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His Majesty's Commissioners appointed to collect Information in the Manufacturing Districts, as to the EMPLOYMENT OF CHILDREN IN FACTORIES, and as to the Propriety and Means of CURTAILING their HOURS of LABOUR. (London: House of Commons, 1833); Horner, L., Howell, T.J., Saunders, R.J., & Stuart, J. *Reports by the Four Factory Inspectors of the Effects of the Educational Provisions of the Factory Act; together with a Joint Report as to any Modifications of those Provisions.* (Great Britain: House of Commons, 1839); House of Commons *The Physical and Moral Condition of the Children and Young Persons Employed in Mines and Manufactures.* (London: John W. Parker, 1843); Kay, J.P. *The Moral and Physical Condition of the Working Classes Employed in the Cotton Manufacture in Manchester.* (London: James Ridgeway, 1832).

[23] Farr's reports to the Registrar General, such as House of Commons, *First Annual Report of the Registrar-General of Birth, Deaths, and Marriages in England.* (London: HMSO, 1839).

[24] Gill, G., Burrell, S., and Brown. J. 'Fear and Frustration: the Liverpool cholera riots of 1832', in *Lancet* **v358**, issue 9277, 21 July 2001: 233-7.

[25] Listed at the end of this thesis.

[26] Hügel, F.S. *Beschreibung sämmtlicher Kinderheilanstalten in Europa: nebst einer Anleitung zur zweckmässigen Organisation von Kinder-Krankeninstituten und Kinderspitälern, mit Beiträgern zur Geschichte und Reform sämmtlicher Spitäler im Allgemeinen.* (Vienna: Kaulfuss Witwe, Prandel & Comp., 1848).

making technical procedures the focus of its activities and leaving the public health origins to be forgotten.

Chapter three discusses the breakdown of the established conceptual model by which medicine had hitherto been practised and the crisis of confidence which the profession was facing in the 1830s and 1840s.[27] It considers the adoption by some younger physicians of the statistical methods which were shaping the public health movement, and the way in which these provided an intellectual foundation for proponents of children's hospitals.[28] Childcare manuals illustrate the gradual specialisation which took place as the medical care of the infant was taken out of the hands of mother or nurse and into those of the physician,[29] while the medical press of the period provides a wide range of reports and correspondence which offer an insight into the evolving views of the professionals and some of the debates which were taking place.[30]

Chapter four examines in some detail the arguments against allowing the creation of children's hospitals and then considers how these arguments were answered by Charles West, founder of the first British children's hospital, at Great Ormond Street (GOSH), going on to discuss the aims of that hospital. Some private correspondence of Charles West survives which helps illustrate his place in the context of the European movement for children's hospitals. The writings of Florence Nightingale, on the other

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[27] Gill, Burrell, and Brown. 'Fear and Frustration: 233-7; Bonner, T.N. *Becoming a Physician: Medical Education in Britain, France, Germany, and the United States, 1750-1945.* (Oxford: Oxford University Press, 1995); Huerkamp, C. *Der Aufstieg der Ärzte im 19. Jahrhundert: vom gelehrten Stand zum professionellen Experten; das Beispiel Preußens.* (Göttingen: Vanderhoek & Ruprecht, 1985); Bynum, W.F. *Science and the Practice of Medicine in the Nineteenth Century.* (Cambridge: Cambridge University Press, 1994); Pelling, M. *Cholera, Fever, and English Medicine 1825-1865.* (Oxford: Oxford University Press, 1978).

[28] Farr. William. (1838) 'On Prognosis', in *British Medical Almanack*, 1838; Supplement p199-216; Part 1: 199-208.

[29] Buchan, W. *Advice to Mothers on the subject of their own health; and on the means of promoting the health, strength, and beauty of their offspring.* (London: Cadell and Davies, 1803); Combe, A. *A Treatise on the Physiological and Moral Management of Infancy.* (Edinburgh: Maclachlan, Stewart, & Co., 1840); Dewees, W.P. *Treatise on the Physical and Medical Treatment of Children.* (London: John Miller, 1826); Ellis, R. *Disease in Childhood, its common causes, and directions for its practical management.* (London: G. Cox, 1852); Forsyth, J.S. *The Mother's Medical Pocket-Book.* (London: D. Cox, 1824).

[30] Sources used include the *British and Foreign Medico-Chirurgical Review; Dublin Journal of Medical Science; Dublin Quarterly Journal of Medical Science; Dublin Quarterly Medical Review; Edinburgh Medical and Surgical Journal; Glasgow Medical Journal; Journal für Kinderkrankheiten; Lancet; Medical Times and Gazette; Medico-Chirurgical Review; Monthly Journal of Medicine.*

hand, show precisely the kind of intellectual obstacles which West fought successfully to overcome in order to open his hospital. What emerges is West's understanding of the child's perspective on hospital treatment, be that medical care such as the administration of drugs, nursing care such as bath-time, or moral care and the need for play and enjoyment. This was an innovation which would characterise the new institutions. The detail with which the case for GOSH was assembled is compared with the way in which the second children's hospital, Norwich's Jenny Lind Infirmary, came into being.

The nature of the evidence regarding the early years of these children's hospitals is very uneven, and key sources fall into three main categories: contemporary reports and polemics; academic histories, and institutional histories. The case for opening hospitals specifically for young children was made in journals such as the *Lancet*,[31] in newspapers such as the *Daily Scotsman*,[32] and in pamphlets.[33] The Clinical Hospital for the Diseases of Children in Manchester published annual reports which give some indication of their early activities, and their principal points were distilled and circulated to a wider medical audience through the medical press,[34] while Charles West set out his philosophy and experience at Great Ormond Street Hospital as a model for others.[35] A comparison of the British experience with that of Germany in founding and operating children's hospitals reveals a number of different approaches and philosophies which help to highlight some of the choices which the British pioneers had to make.[36] Of particular interest is Hügel's overview of European children's hospitals,

[31] For example *Lancet*, 30th March, 1850: 388-9, arguing the case for a hospital to be established in London for sick children.
[32] The case for the Edinburgh hospital was very clearly articulated in 'Hospital for Sick Children', *Scotsman*, 22nd Jan, 1861: 4.
[33] For example Whitehead, J. & Merei, A.S. *Suggestions for a Clinical Hospital for the Diseases of Children*. (Manchester: Bradshaw and Blacklock, 1851).
[34] Review: 'First Report of the Clinical Hospital for Children's Diseases, Manchester', in *Glasgow Medical Journal*, Vol. V (No. 18, July 1857): 246-51.
[35] West, C. *How to Nurse Sick Children; Intended especially as a help to the nurses at the hospital for sick children: but containing directions which may be found of service to all who have charge of the young.* (London: Longman, Pearson, Green, and Longmans, 1854).
[36] Corzelius, T. *Private Kinderkrankenhäuser im deutschen Sprachgebiet (1837-1900).* (Cologne: Universität Köln, 1988); Miller, U. *Zur Geschichte Münchner Krankenhäuser.* (Unpublished thesis: Ludwig-Maximilians-Universität zu München, 1964); Oehme, J. *Pioniere*

and in particular his publication of Charles West's account of the frustrations he had encountered in trying to establish a children's hospital in London.[37] Hügel described the aims and the methods employed by every European children's hospital that was in existence in 1847-8, and discussed practicalities such as budgeting, staffing, regimen, and the physical structures of the hospitals themselves. It is possible to discern a wide range of purposes and approaches, and thus to establish the context in which West founded his children's hospital. That West was well aware of his contemporaries' activities is made clear by his surviving correspondence: the archives at Great Ormond Street Hospital contain a number of letters written to West by prominent European physicians in response to his requests for information about their experiences in founding and operating children's hospitals.[38]

Chapter five is a comparison of three hospitals in Manchester. One of the debates around the founding of children's hospitals was whether it might not be better to add children's wards to existing institutions, and St. Mary's was a hospital which did just that. The other two, the Manchester Children's Hospital and the Cheetham Hill Clinical Hospital were both founded with the involvement of expatriates. Louis Borchardt, from north Germany, followed the Prussian tradition which treated health care as a branch of social welfare and focused on the relief of suffering. August Schoepf Merei came from an academic medical background in Austria and brought a more intellectual approach to his work in Manchester. The chapter seeks to trace their national origins and medical traditions in the very different styles of medicine practised at the two hospitals.

Much pioneering work regarding children's health and children's hospitals was done in the German-speaking lands, and there is a useful body of literature to draw on which informs this thesis in general but this chapter in particular. It includes a comprehensive

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der Kinderheilkunde. (Lübeck: Hansisches Verlagskontor, 1993); Reyer, J. 'Geschichte frühpädagogische Institutionen' in Fried, L. & Roux, S. (eds) *Pädagogic der frühen Kindheit.* (Weinheim: Beltz, 2006).

[37] Hügel, *Beschreibung sämmtlicher Kinderheilanstalten in Europa*: 93-99.

[38] For example *Letter from Dr. Behrend to Mr. Charles West, M.D., Physician to St. Bartholomew's Hospital etc. etc.*; *Letter from Dr. Mauthner to Mr Charles West M.D, Physician to the ~~Bartholomew's Hospital~~*[crossed out by Mauthner] *and to the Dispensary for the Children etc etc*

survey of children's hospitals undertaken by Dr. Franz Hügel,[39] a more recent overview (an unpublished thesis) by Thomas Corzelius,[40] and the Austro-Hungarian equivalent of the *Dictionary of National Biography.*[41] This material illustrates a number of different strands of thinking in the development of children's hospitals, demonstrating different paths which might have been taken in Britain, thus helping historians to pose the questions necessary in enabling a meaningful analysis of the origins of the first hospitals to be established here.

The theme of chapter six is the way in which the local culture influenced the very different responses of two cities, Liverpool and Edinburgh, to the public health crisis that confronted them, and so shaped their children's hospitals. In addition, it demonstrates that the Edinburgh hospital, although opened in 1860, only eight years after GOSH, shows a synthesis of ideas from its predecessors, indicating that the pioneering era was over and that the development of children's hospitals was entering a new, maturer phase, and records of the annual general meetings of the Hospital for Sick Children in Edinburgh give a very clear insight into the philosophy and moral mission of its founders and movers in a way that is quite distinct from those of the English hospitals.

The emergence of children's hospitals in Great Britain came about as a result of a very particular set of circumstances, after earlier efforts had come to nothing. The great Parliamentary inquiries had shocked the consciences of a substantial portion of the upper- and upper-middle classes of a range of political persuasions, and statistical evidence went along way both to making the case for action and to countering a number of the old arguments against it.[42] In the first instance the action was for intervention along what came to be known as public health lines – removal of filth, improvement of ventilation, and the first moves towards better water supplies and

[39] Hügel, *Beschreibung sämmtlicher Kinderheilanstalten in Europa.*
[40] Corzelius, *Private Kinderkrankenhäuser.*
[41] Wurzbach, C. von, *Biographisches Lexikon des Kaiserthums Österreich* (Vienna: k-k Hof- und Staatsdrückerei, 1876).
[42] Clay, 'Report on the Sanatory Condition of Preston'.

housing. There was, more problematically, also a need to educate the public in matters of hygiene.[43]

It came to be seen that one tool for helping to achieve these goals might be a new type of hospital. Hospitals established with the aim of reducing morbidity and mortality among young children came slightly later in the process of reform, but rested on the same foundations as the public health movement. They came at a time when faith in therapeutic intervention was at its lowest, but they provided children with a respite from the environments which had made them sick and offered the possibility of educating those who had care of them, whether parents or nurses. As physicians adopted the new statistical methodology, hospitals offered the possibility of observing, measuring, and comparing large numbers of children on a systematic basis, allowing the development of a new branch of medicine, and the new hospitals would provide centres where students could learn about this new area of study.

[43] Macdonald, L. (ed) *Florence Nightingale on Public Health Care.* (Waterloo, Ontario: Wilfrid Laurier University Press, 2004); Boehm, K. '"A Place for More than the Healing of Bodily Sickness": Charles Dickens, the Social Mission of Nineteenth-Century Paediatrics, and the Great Ormond Street Hospital for Children,' *Victorian Review* (Spring, 2009) **35** (1): 153-173.

Chapter 1: Literature Review

1.1 Introduction

Cunningham has illustrated the shifting trends in the historiography of childhood, showing for example how the widespread 1970s view of the history of childhood as being one of improvement over time had by the 1980s been widely superseded by an emphasis on the continuity of the loving nuclear family as the predominant setting for childrearing.[1] Like many other historians discussed in this chapter, Cunningham discusses child mortality but not the provision of health care for children, despite examining philanthropic provision for children in the nineteenth century. This chapter therefore begins with a consideration of some different ways in which historians have identified childhood as a distinct phase of life, qualitatively different from adulthood. It will be shown that there has been a fragmentation in the study of childhood, with some historians concentrating on the experiences of particular social classes, but others looking at the contributions made by psychology and physiology.

The chapter goes on to examine some of the ways in which industrialisation and urbanisation changed the experience of childhood for so many nineteenth-century children. Questions were being asked about the role of the child and the nature of childhood, whether the child had a tendency to delinquency or was the natural object of protection, and whether childhood mortality was in the natural order of things or should be considered a matter of concern.[2] It will show that the breakdown of traditional social structures led to the creation of new institutions which would both support and police the labouring classes, and among these institutions were, arguably, the hospitals.

The following section, addressing historians' approaches to the question of child labour, highlights their tendency to interpret past actions in terms of the values of the historians' own era rather than that of the historical actors, although it notes the

[1] Cunningham, H. *Children and Childhood in Western Society Since 1500.* (Harlow: Longman, 1995).
[2] Postman, N. *The Disappearance of Childhood.* (New York: Vintage Books, 1994, pbk).

significance of the attempt during this time, however flawed, to identify a time when childhood ended and adulthood began. The discussion of child health shows the growing awareness of the problem of child mortality and indicates the contribution which was made by the statistical movement to the campaign for action, but it also demonstrates the tendency of many historians of the period to underestimate the extent to which there was a demand among the educated classes that action be taken to reduce this mortality. The final section provides a brief overview of the limited extent to which historians have considered children's hospitals in Great Britain.

1.2 The Invention of Childhood

This section examines some general histories of childhood, one key issue in the historiography being the emergence of notions of childhood as a discrete stage in life. Modern histories of childhood are sometimes said to have begun with Philippe Ariès' work of 1960, *L'Enfant et la Vie Familiale sous l'Ancien Regime*.[3] Rhodes suggests that since the publication of this work, historians of childhood have differentiated increasingly between the experiences of different groups of children, rather than viewing childhood as a generalised phenomenon. Questions of social class, economic and social change, and gender relations have all been examined more closely, and historians have taken a new interest in the testimony of individuals rather than trying to construct broad narratives. She notes that micro-history of this kind has its limitations, since it forms a poor basis for examining larger movements and trends.[4] The idea of trends has itself been questioned, though, as Whig history has fallen from favour.[5] The bulk of Ariès' work deals with the period before the nineteenth century, and looks at broad changes in social structures. He asserts that mediaeval society had no real concept of childhood as a separate state of being, claiming that once children were old

[3] For example Cooter, R. (ed.) *In the Name of the Child* (London: Routledge, 1992).
[4] Rhodes, M. 'Uncovering the History of Childhood' in Mills, J. & Mills, R.W. *Childhood Studies: A Reader in Perspectives of Childhood.* (London: Routledge, 2000).
[5] Butterfield, H. *The Whig Interpretation of History.* (London: G. Bell and Sons, 1931).

enough to leave their mothers' sides they entered the adult world. By this account, ideas of childhood as a qualitatively distinct phase of life only began to emerge in the seventeenth century. Ariès discusses class differences in the experience of childhood, and the increase in differentiation as the economy became more complex, so that it was not possible to talk about a common childhood for all. For Ariès, the awareness of childhood as being distinct from adulthood arose as a consequence of the emergence of a preoccupation with civilised manners and conduct among the middle and upper classes; children became seen as human beings in an uncivilised form, and in need of improvement and training. Ariès thus sees the concept of childhood as inherently oppressive to children. Although he says little about child health, Ariès does stress the importance of the aspect of Thomas Malthus' doctrine which claimed to show that high levels of child mortality were, if not inevitable, at least explicable by increases in population. Ariès' conclusion is that only when birth control reduced the size of families, and hence the level of child mortality, was it possible for parents to form a greater emotional attachment to their children.[6] A variation of this approach is taken by Zelizer, who asserts that the emotional or sentimental value of children increased as their economic valued declined following the limits placed on child labour and, especially, the introduction of compulsory education after 1880.[7]

Whilst Ariès' interpretation of nineteenth-century family relationships has since been challenged, the reference to Malthus does shed some light on the apparent acceptance of high levels of child mortality, if not by parents, then at least by many policymakers in the early years of the nineteenth century. Ariès' concentration on class differences is characteristic of a great many subsequent authors who based their explanations on economic and demographic statistics, couching their arguments in terms of social class and economic relationships. Authors who have been influenced by this approach

[6] Ariès, P. *Centuries of Childhood.* (Harmondsworth: Penguin Educational, 1979, pbk): 395ff.
[7] Zelizer, V.A. *Pricing the Priceless Child: the changing social values of children.* (New York: Basic Books, 1985).

include Hopkins,[8] Cruickshank,[9] and Walvin.[10] It is to the advantage of this study, which is concerned primarily with the medical care of the poorest children in society, that historiographical fashion has led many historians of nineteenth-century childhood to concentrate on examining the lives and experiences of working-class children.

Ariès' themes of the emergence of childhood as a phenomenon of the modern era and of the way in which the experience of childhood varied with social class are taken up by Stone and Postman (neither of whom discusses child health). Stone lists four attitudes to the newborn which shaped policy towards and beliefs about childhood: the dominant view in the seventeenth century was religious, shaped by a belief in Original Sin and the need to break the child's will and instil habits of obedience and virtue; the Romantic view emerged in the eighteenth century and held that the child was born a blank slate, a *tabula rasa*, and would be shaped by whatever influences were brought to bear; at much the same time the Utopians maintained that children were born positively good, but liable to corruption by the adult world; and the biological view, favoured by astrologers (and also Galenic medicine), held that children possessed innate qualities which varied from individual to individual.[11] These definitions or classifications are concerned primarily with the moral qualities of children and contain a sense of maturation only in as far as the child is seen as capable of being morally shaped by its environment. Stone goes along with Ariès in proposing that childhood as is now understood emerged in different social classes at different times, but has done so since the seventeenth century. His account is predominantly that of the middle and upper classes, using as evidence sources such as diAriès, letters, publications, toys, and visual images. He suggests that it was the middle classes whose view of childhood was dominated by religious considerations, in contrast with the 'pleasure-seeking upper

[8] Hopkins, *Childhood Transformed.*
[9] Cruickshank, *Children and Industry.*
[10] Walvin, *A Child's World.*
[11] Stone, L. *The Family, Sex and Marriage in England 1500-1800.* (London: Penguin, 1979, pbk): 225.

class or the illiterate poor',[12] and he makes the point that stricter views about raising children only became more general with the Victorian religious revivals and the increased awareness of health and disease – moral and physical hygiene coming to the fore at much the same time. This change coincided with the middle part of the nineteenth century and the emergence of the children's hospital.

Postman argues that the child's world only became separated from that of the adult with the advent of mass literacy; in a largely oral culture there were no clear boundaries between children's and adults' discourses, and the very term 'child' referred to a relationship rather than a stage of life. The crucial moment for Postman was the invention of the printing press, which led to a steady separation of the children's sphere, dominated by oracy, from that of the adult, dominated by literacy. Thus, adulthood was defined as the point at which children acquired adult habits of reading, and Postman identifies the period between 1850 and 1950 as 'the high-watermark of childhood';[13] the start of this time also marks the start of the movement in Britain to open hospitals for young children. He distinguishes between Locke's Protestant view of the child as an unformed person who through literacy, education, reason, self-control, and shame may be made into a civilised adult, and that of the Romantic, Rousseau, who saw this process as being the very thing which robbed the child of its qualities of candour, understanding, curiosity, and spontaneity. These views are contrasted in many histories of childhood in this period and would form the poles of the mid-nineteenth century debates around education and child labour, as well as informing discussion concerning the best way to nurse sick children, illustrated by the differences between the views of Charles West[14] and Florence Nightingale.[15]

[12] Stone, *The Family, Sex and Marriage in England*: 23.
[13] Postman, *The Disappearance of Childhood*: 68.
[14] West,
w to Nurse Sick Children.
[15] Nightingale, F. *Notes on Nursing: What it is, and what it is not.* (London: Longman, Green, Longman, Roberts, and Green,1859).

These views are challenged by DeMause, who attempts a psychoanalytical interpretation of the history of childhood. DeMause's psychogenic theory of history rests on the Freudian belief in the existence of innate psychosexual drives; not only do individuals develop by stages, but so have social attitudes towards the raising of children, and generational pressure has led to a continuous improvement in the quality of childrearing. He explicitly rejects Ariès' notion of the invention of childhood leading to the end of freedom for children and the imposition of tyranny. DeMause asserts that only in recent times has childhood been anything other than a nightmare for children, subject as they have been to all manner of neglect and abuse, and he condemns attempts by historians to understand the events of the past in terms of the value systems of the period. Whereas Stone and Cunningham consider different ideologies of childhood, acknowledging for example that there have been times when a child's spiritual salvation was considered to be more important than their physical well-being, for DeMause there is only one perspective to be taken on what he regards as child cruelty, although he seems to be isolated in his approach. [16]

Another perspective is provided by Steedman, who describes the changing medical understanding of the nature of childhood, suggesting that this process began with Goethe's work at the end of the eighteenth century.[17] A transformational step seems to have been the development of a unified cell theory by Schleiden (1838) and Schwann (1839) in Berlin,[18] after which further work, shows Steedman, demonstrated that cellular activity was particularly vigorous in children. From this observation came the idea of physical maturation, as opposed to mere growth. This in turn gave rise to the idea that children's diseases could be distinguished from those of adults, and that children might also respond differently to adult diseases. This new study also suggested that human bodies were themselves systematic and followed physical rules or laws, rather than being unique to each individual. A science of pathology was

[16] DeMause, *The History of Childhood.*
[17] Steedman, C. *Strange Dislocations.*
[18] Vasil, I.K. 'A History of Plant Biotechnology: from the Cell Theory of Schleiden and Schwann to biotech crops', in *Plant Cell Rep*, (2008) 27:1423-1440.

already emerging, making the classification of diseases much surer and giving a theoretical foundation for the empirical discoveries that had been made in the Paris clinics.[19] The systematic study of children's physiology gradually separated them from adults, and this was supported by work that was taking place in other fields, building for example on the ample demographic evidence which was by this time available. Thus it was that when Mauthner founded a children's hospital in Vienna, in 1837, he intended to create an institution where children could receive the care which they would not receive either at home or in a hospital which was primarily concerned with adults. He noted that it was an acknowledged truth that 'the child is not simply a small adult, either in its external features or in its inner life.'[20] Corzelius describes this insight as a 'core axiom' of the new hospitals, although he adds that it was to be a long time before this axiom was generally accepted outside Vienna.

The factory enquiries of the 1830s produced advances in physiological knowledge, as well as the more familiar socio-economic analyses. Hamlin shows how it became recognised that deformities could be produced in children while bones were malleable, and puberty could be delayed.[21] Walvin challenges the value of attempts at defining childhood in physiological terms, asserting that physical maturity was a poor guide to age and stage of development because there were so many variations across social classes and across time, although he manages to fix the end of childhood at fourteen years.[22] Kirby shows that Walvin's claim that ideals of childhood and family life were set by middle-class observers, who thus judged the working class and found them wanting, undervalues the work which was pioneered by the factory inspector Leonard Horner, but continued by many others, in establishing growth norms among factory children specifically in order to be able to assess them according to their particular

[19] Foucault, M. *The Birth of the Clinic: an archaeology of medical perception.* (London, Routledge Classics, 2003, new ed.).
[20] 'Das Kind weder in seinem inneren Leben noch in seinem Lebensäußerungen ein bloß verkleinerter Mensch ist.' Corzelius, *Private Kinderkrankenhäuser*:10.
[21] Hamlin, *Public Health and Social Justice.*
[22] Walvin, *A Child's World:* 13.

circumstances.[23] Walvin does demonstrate the way in which middle- and working-class lives had become separated: the investigations into the living and working conditions of the lower classes were carried out by middle-class observers who were shocked by what they discovered. Many accepted ideas were challenged, such as the myth of the innocence of childhood, which was overturned by the precocity shown by the young workers.[24]

Hendrick's eclectic approach acknowledges the different perspectives on childhood which were presented not just by observers such as Horner and campaigners like Owen, but by others such as educationalists, medics, scientists, artists, and religious adherents, as well as children themselves. His approach to the history of childhood is influenced by both feminism and postmodernism, since he argues firstly that children have been excluded from many historical accounts just as women have been, and secondly that each historian constructs a new interpretation of childhood by virtue of the viewpoint and the facts which they select. Hendrick himself notes that children are generally only visible in historical accounts as 'delinquents', since the 'normal' child does nothing which is deemed worthy of comment by most historians.[25] This is a significant observation as regards the history of child health, since important work that was being done in the 1830s-50s to establish growth and development norms gets overlooked by historians whose attention is drawn to the tales of sickness and death.

1.3 The Transformation of Childhood in the Nineteenth Century

This section considers some of the more substantial historiography that deals with the major changes in attitudes towards, and experiences of, children in the early-mid-nineteenth century. This period emerges as a key phase in the change in the way in

[23] Kirby, *Height, Urbanisation, and Living Conditions.*
[24] Walvin, J. (1982) *A Child's World:* 12-15.
[25] Hendrick, H. 'The Child as a Social Actor in Historical Sources', in Christensen, P.M. & James, A. (eds.) *Research with Children: Perspectives and Practices, 2nd ed.* (Abingdon: Routledge, 2008): 47.

which children were regarded and treated. Historians vary between Foucaultian ideas about control and others, such as Hendrick, who focus more on efforts to improve children's well-being. Discussion of reforms concentrates on legal and social welfare and largely avoids matters to do with children's health.

The twin phenomena of industrialisation and urbanisation created a transformation in the experience of childhood for a substantial proportion of the working-class population, and there followed a succession of legislative and other measures to try to ameliorate the worst effects of these changes. With the population doubling from just under ten million to more than twenty million between 1801 and 1861,[26] by mid-century one person in three was under the age of fifteen, and many of these had to be cared for while their mothers worked.[27] It can be difficult for the modern commentator to understand the extent to which social structures were being recast, and the speed with which this was happening. Probably only a third of women were in regular employment during this period, but many others would take casual work in places such as laundries. Some children were cared for by their older sisters; others would be put out to childminders, or simply drugged and left unattended.[28] Serious or fatal domestic accidents were common among these poorly-attended children, while infants who were not with their mothers could not be suckled and had to make do with unsatisfactory and frequently unhygienic feeds of bread and milk or arrowroot.[29]

Whilst it was clear that some families were failing to provide adequately for the care of their children, there was a marked reluctance to engage in any official intervention, partly out of respect for what Hendrick describes as the 'natural order', by which fathers were held to be responsible for supporting their families.[30] At the time of the debates around the 1802 Health and Morals of Apprentices Act the main cause for concern was that where children were expected to contribute to the family income, that natural order

[26] Walvin, *A Child's World:* 18.
[27] Horn, *The Victorian Town Child*: 2-6.
[28] Clay, 'Report on the Sanatory Condition of Preston'.
[29] Horn, *Victorian Town Child*: 55-58.
[30] Hendrick, H. *Child Welfare and Social Policy.* (Bristol: Policy Press, 2005): 9.

was subverted since they were assuming the parental role. In coming decades a similar argument would be used to oppose the provision of support for poor families, including the provision of medical care for their children, whether through the Poor Law or through charitable intervention, since the provision of such support would displace the father from his role as head of the household, with both the responsibilities and the rights which that position implied. Undermining the social order at family level would, feared some, lead to social revolution as such disruption became habitual and the established social order was seen to be challenged. There were nevertheless fears that some families were simply not providing for their children as they should, and Cunningham focuses on the child as it became the object of protection rather than care, with particular emphasis on the children of the poor. He examines economic and legal issues rather than the medical care of children, however. Utilitarians were aware that the free market was not working for the benefit of all and began to argue for reform, but it was only with the accumulation of large quantities of systematically-compiled information, including statistics, that they were able to make a compelling case for change. Romantics, on the other hand, promoted an idealised view of childhood altogether without labour, Froebel for example publishing his *Education of Man* in 1826, declaring 'Play is the child's real work'.[31] This view was more in accordance with the aspirations of the middle class than those of the poor.[32]

Concern for welfare in this period is discussed mostly in terms of child labour and education. It has been shown that many of the more recent historians of childhood have been interested in the experiences of working children, and concern for children in the mid-nineteenth century was at least as much for their moral as their material welfare. Whilst there were attempts being made at clarifying the moral and legal status of children, far less attention was being paid to the physiological or medical characteristics of childhood. At the start of the nineteenth century children were seen as simply incomplete human beings whose hold on life became less fragile as they got

[31] Hughes, J.H. *Froebel's Educational Laws for all Teachers*. (New York, NY: Appleton, 1899): 145.
[32] Cunningham, *Children and Childhood:* 140ff.

older.[33] Where children did receive medical attention it was, in the period before 1830, essentially no different from that given to adults. It was known that infants were less likely to survive in town than in the countryside, although the difference became less marked in older children. Cruickshank quotes a Manchester surgeon, John Roberton, thus: "Most of the sickly and feeble die in the first year of life. Consequently only the vigorous, in general, attain their fifth year and above."[34] In other words, what was happening was no more than a weeding-out process, and there was no great reason to interfere with this. It was seen as something of a problem in France, where population was declining and where, as a result, the first modern children's hospital was established in 1802. Britain, however, was facing a population explosion at this time, and there was a plentiful supply of children to replace those who died.[35] Dwork asserts that this approach fitted well with the early Victorian belief in a *laissez faire* approach to government,[36] although the evidence from successive enquiries and campaigns would suggest that there was in fact a growing perception that the problem required intervention of some kind, but little idea to begin with as to what should be done about it.

Just as Walvin notes the more than doubling of the population between 1801 and 1861,[37] so commentators such as Woodall describe the pace with which urban centres grew and the squalor which arose from the inadequacy of housing provision and other services, whose development simply did not keep pace with the demands placed upon them.[38] Under these circumstances, the failure of legislators to keep up with changing conditions of employment and family life is hardly surprising. Tönnies examined the consequences of the breakdown of traditional communities based on personal relationships (*Gemeinschaft*) and their evolution into societies based around more

[33] Lomax, E.M.R. *Small and Special:* Ch1:4.
[34] Cruickshank, M. *Children and Industry:* 26.
[35] Lomax, *Small and Special:* Introduction: 1.
[36] Dwork, D. *War is Good for Babies and Other Young Children.* (London: Tavistock, 1987).
[37] Walvin, *A Child's World:* 18.
[38] Woodall, A.M. *What Price the Poor? William Booth, Karl Marx, and the London Residuum.* (Aldershot: Ashgate Publishing, 2005).

formal structures (*Gesellschaft*). Under the new arrangements the individual became depersonalised, a cog in the machine.[39] This description is supported by the accounts from social inquiries of the 1830s and 1840s, which depict factories as increasingly depersonalised environments, with the pace of work being dictated by the rhythms of steam machinery rather than by the human beings who operated that machinery. The consequence, as described in the Health of Towns surveys, is the breakdown of arrangements by which families would care for their children, particularly in times of sickness, and their substitution by childminding arrangements which might be carried out by other children or by unsuitable women and which frequently involved on the one hand accidents arising from neglect, and deaths from sedation – 'quietness'- on the other.[40] Tönnies described the way in which this formalising process led to there arising a notion of society as an abstract phenomenon, with claims and interests of its own, and in particular claims on the individual people within it. These claims included an interest in the well-being of children, an interest which, it could be argued, transcended the mere personal claims of parents. This process is visible in the first attempts at factory reform and the imposition of education. It was a disputed process, since it challenged the idea of the family as a God-given structure in which the state had no business interfering. Emblematic of the new struggle for authority over children's bodies was the debate about vaccination for smallpox. This became compulsory in 1853 and met a sustained campaign of resistance.[41]

This struggle was part of a wider movement to reform public institutions which included the hospitals. Foucault examines ideas about delinquency through his assertion that the development of many institutions which were created or reformed during the nineteenth century was driven by the desire by the state to assert a much greater degree of social control and thus to hinder or prevent acts of delinquency in its widest

[39] Tönnies, F. (translated by C.P.Loomis) *Community and Society: Gemeinschaft and Gesellschaft.* (Michigan: Michigan State University Press, 1957).
[40] Clay, 'Report on the sanatory condition of Preston': 46.
[41] Weber, T.P. 'Alfred Russell Wallace and the Antivaccination Movement in Victorian England', in *Emerging Infectious Diseases*, **16**, 4 (2010): 664-6.

sense.[42] He describes the process by which settled rural communities gave way to more urbanised patterns of living in which significant portions of the population floated between jobs and also addresses. As well as breaking traditional community links, as Tönnies had observed,[43] this led governments to create new institutions which would, as Foucault puts it, 'pin down' the working population. The first step in this process was panopticism. Bentham had described the panopticon as a physical institution by which the knowledge that they could be observed at any time would cause prisoners to modify their behaviour, since the likelihood of misbehaviour being detected was ever-present.[44] Foucault extended this idea, saying that the nineteenth century saw the emergence of the panoptic society, with new institutions being created in order to maintain scrutiny over an ever-increasing proportion of the population. Not only prisons took on a new form during this period: this was the time in which factories, hospitals, schools, asylums, poorhouses, and army barracks all took on patterns which remain recognisable today, all to some extent mimicking the new prisons. For Foucault, scrutiny was a precursor to intervention. Once established within an institutional setting, people became subjects for experiments in ways of reforming and controlling them.[45] Certainly this pattern can be discerned in the process by which social enquiries scrutinising the poor led to reports which formed the basis for legislative and social interventions. Reforming the habits of the working class was to be an explicit aim of several of the new children's hospitals, as were, in some cases, experiments in the most literal, physical sense. It will be argued that several of the new children's hospitals were intended less for the treatment of sick children than to draw them and their families into the gaze of those who sought to reform their way of life.

Hopkins explains attempts at reform in terms of humanity rather than control. He examines the experiences of children working in different types of employment and the

[42] Foucault, M. *Discipline and Punish: The Birth of the Prison.* (London: Penguin, 1991, new ed.): 195-230.
[43] Tönnies, *Community and Society.*
[44] Foucault, *Discipline and Punish:* 195ff.
[45] Foucault, *Discipline and Punish:* 195ff.

debates about child labour which took place among social reformers and their opponents. He considers the impact of the movement to increase the amount of education which was offered, but says little about child health beyond comparing the morbidity and mortality figures for different groups of children and linking these to patterns of employment among children and their parents. Two explanations which Hopkins cites for the measures which were taken to improve the lives of children at the beginning of the nineteenth century are the influence of the Enlightenment and the rise of the Evangelical movement, which between them are held to account for, among other things, the abolition of the slave trade (1807) and slavery itself within the Empire (1833), the Sunday School movement, the Speenhamland system of outdoor relief for paupers, and the first attempts at factory reform (such as the Health and Morals of Apprentices Act, 1802). These are taken to be signs of a more humane sensibility in British public life.[46] He is careful to challenge some of the stereotypes which have grown up around this period, claiming in particular that the New Poor Law was in many ways effectively run and reasonably humane, and that abuses were grossly exaggerated by polemicists such as Charles Dickens and Sidney and Beatrice Webb. His narrative is Whiggish, one of continual improvement over the course of the nineteenth century, with a steady increase in, for example, life expectancy.

While interest in public health, and in the health of children in particular, was of steadily-increasing concern to commentators between 1830 and 1850, the bulk of historical writing about children in the nineteenth century focuses on socio-political issues rather than health, and where health is addressed it is likely (with the notable exception of Illich[47]) to be in terms of the public health debates of the middle and later parts of the century. Information about medical provision for improving child health is relatively rare. Whilst Cruikshank gives a brief overview of available healthcare provision, more typical is the work of Horn, whose analysis of children's welfare is

[46] Hopkins, *Childhood Transformed.*
[47] Illich, I. *Limits to Medicine - Medical Nemesis: The Expropriation of Health, new ed.* (London: Marion Boyars, 1995): parts I, II, & III.

largely narrative. Her examination of the first half of the nineteenth century focuses, despite its title, more on children as the objects of adults' motives and actions than on the children themselves. She says nothing at all about hospitals or dispensaries.[48] Horn's work on urban childhood focuses on domestic circumstances, education, and employment, concentrating largely on the second half of the nineteenth century. She devotes two pages to the opening of the children's dispensaries in Manchester and in Waterloo Road, London, and to the work of Great Ormond Street Hospital and the Manchester Children's Hospital, but gives little explanation other than to say that there were a lot of sick children needing treatment.[49] She mentions the existence of burial clubs without analysing the problem they presented for health reformers, and her work on rural children gives some detail about domestic or folk remedies but sheds no light on the development of institutional health care provision in the first half of the nineteenth century, since this was something which served the urban but not the rural population.[50] Possibly surprisingly, whilst Horn describes at length the effects of labour and poverty on children's health, she has little to say about what attempts were made, if any, to improve it.

The issue which drew attention to the question of child health was that of child labour. . A number of factors influenced the debate as to the proper treatment of children. One was economic efficiency and, by extension, necessity. Utilitarians argued that interference by politicians in the running of the economy would lead to inefficiency and, in the long run, greater economic hardship. They were able to call in support the employers who relied on child labour to keep their undertakings in operation, and the parents whose children's wages formed a crucial element of the household income. There was also a wider belief that any limit on child labour would cause the price of

[48] Horn, *Children's Work and Welfare.*
[49] Horn, *The Victorian Town Child:* 141-2.
[50] Horn, *The Victorian Country Child.*

goods to rise, leading to a fall in demand and ultimately to a fall in adult wages as the economy became depressed.[51]

Hendrick examines changes which took place in the understanding of children's status, and particularly the nature of child labour, at the end of the eighteenth and beginning of the nineteenth centuries.[52] He notes firstly that the examination of child labour which preceded the passing of the Health and Morals of Apprentices Act, 1802, identified the qualitative difference between a contract of labour entered into by an adult and that by a child, and concluded that child labour could not truly be said to be free. Marxists would interpret this in terms of unequal power relationships, but it could also be taken as an early step towards the development of the concept of cognitive maturation, an indication of the idea, still contested at this time, that children were not merely small adults. It has been noted that Stone and Postman have remarked upon the rejection by Romantics such as Rousseau of the doctrine of Original Sin. Both the utopian and *tabula rasa* approaches suggested in slightly different ways that children were born innocent and that the path to adulthood was characterised by a process of moral corruption. Behind this idea lay the suggestion that adults could and should take steps to prevent this corruption from occurring, and indeed much of the discussion around the possible reform of child labour concerned children's moral welfare rather than their physical well-being.

Accounts such as that of Hammond and Hammond present a story of exploitation and resistance. Children, in as far as they feature at all, are presented as victims of a system which elevated profit over human need and in which the only prospect for the working masses was increasing impoverishment.[53] A contrary, if now unfashionable, view is epitomised by Trevelyan, who presents the response to industrialisation as one of progress to a more enlightened future. Trevelyan acknowledges the dire

[51] Frow, E. & Frow, R. *A Survey of the Half Time System in Education.* (Manchester: E.J.Morten, 1970).
[52] Hendrick, 'Constructions and Reconstructions of British Childhood: 34-62.
[53] Hammond, & Hammond, *The Town Labourer 1760-1832*.

consequences of early industrialisation, but paints a picture in which even while political opponents disagreed about the best ways to reform society, all were united by a desire to improve matters for the general population.[54] This Whig approach is epitomised by Pinchbeck and Hewitt's question 'Why were our forebears so slow to recognise the independent rights of the child?'[55] They take for granted the idea that children have independent rights, assume that it was in the natural order of things that these rights should gain recognition, and imply an element of condemnation of the failure of previous generations to do what was manifestly the correct thing. Frow and Frow, whilst avowedly socialist in their politics, are also located firmly within this tradition.[56]

Despite the many criticisms made of child labour, voices were also raised in its support. Prince Albert, the Prince Consort, had described the working man's child as part of his 'productive power',[57] and many children were themselves keen to start work, not only for economic reasons but also as a rite of passage into adult life.[58] More recently, Hopkins has gone to some lengths to demonstrate that conditions for many factory workers were preferable to alternatives such as agricultural gangs.[59] In recent years there has been considerably less published concerning areas such as the Parliamentary Inquiries into Child Labour of 1833 and 1843. One exception is that of Peter Kirby, who takes a more nuanced view; just as Hopkins indicates the attractions which urban life offered in comparison with rural poverty, Kirby demonstrates the social and economic value of child labour, placing it in its historical context rather than judging it with hindsight.[60] Seaman acknowledges the difficulty in arriving at a single coherent explanation for the events of the Victorian era, but nevertheless emphasises economics as a driving force, particularly in his limited consideration of the role of

[54] Trevelyan, G.M. *British History in the Nineteenth Century and After:1782-1919.* (London: Longmans, Green & Co, 2ed. 1937): 242ff.
[55] Pinchbeck, & Hewitt, *Children in English Society:* 348.
[56] Frow & Frow, *A Survey of the Half Time System.*
[57] Horn, *Victorian Town Child:* 118.
[58] Horn, *Victorian Town Child*: 99, 110.
[59] Hopkins, *Childhood Transformed.*
[60] Kirby, *Child Labour in Britain.*

children.[61] An example of a more local historical study, Aspin's analysis of industrialisation in Lancashire gives an entirely conventional account of some aspects of child labour without going any further into areas such as education, leisure, or family life; again, child health features only in as far as it is a product or consequence of factory life.[62] The pattern shown by these examples is confirmed by Humphries, who does look specifically at the consequences of industrialisation for the nation's children. She describes the way in which children, so central to the concerns of Victorian social reformers, gradually vanished from the histories of the period which were written in the later twentieth century. Noting that their role has been re-examined more recently by historians of childhood such as Cunningham and Kirby, Humphries shows how recent studies have been concerned mainly with debates about the economic contribution made by child labour, one question being the extent to which young children (aged below ten years) participated in the workforce at all. Chapter headings include 'Families', 'Household economy', 'Family relationships', 'Wider kin', 'Starting work', 'Jobs', 'Apprenticeship', and 'Schooling'.[63] Where health is considered at all it is in terms of the consequences for children's health of child labour and the need to protect children if they were to become useful adult workers.

By 1833, a Royal Commission had stated that childhood ended at puberty, which was considered to occur around the age of thirteen years, and Hendrick argues that a principal achievement of the campaign to reform child labour was to establish, and enshrine in law, a distinction between children and adults.[64] This, he suggests, was the first step towards the creation of a universally-applicable concept or definition of childhood, and it is significant that one of the criteria used to attempt to create this definition is medical. The question of defining childhood was of particular concern to social reformers, educationalists, and those who were interested in reforming the penal

[61] Seaman, L.C.B. *Victorian England.* (London: Methuen, 1973): 41ff.
[62] Aspin, C. *Lancashire: The First Industrial Society.* (Preston: Carnegie Publishing, 2ed, 1995).
[63] Humphries, J. *Childhood and Child Labour in the British Industrial Revolution*. (Cambridge: Cambridge University Press, 2010).
[64] Hendrick, *Children, Childhood, and English Society, 1880-1990.* 36ff.

system, but it was also of importance to the debate about the medical treatment of children, about which Hendrick has, however, little to say.

1.4 The Problem of Child Health

Throughout the first half of the nineteenth century there was a widespread and increasing awareness of the health problems posed by industrialisation and urbanisation, and a growing interest in the health of children in particular. In the earlier years this concern was linked primarily to the consequences of physical labour for children's productive capacity, but as more detailed demographic information became available and as the medical understanding of the nature of children and childhood developed, there arose a new interest in the possibility of intervening directly to promote the health of young children. What remained was the question of how this might be achieved most effectively and with the fewest adverse consequences for responsible families. The biggest single contributor to infant mortality was summer diarrhoea, a condition which could have been ameliorated by an amalgamation of improved sanitation and more efficient domestic management.[65] This combination of factors was susceptible to precisely the kind of public health intervention which many of the founders of the first children's hospitals were attempting to address. Throughout the nineteenth century, including the period in which successive social investigations were being carried out and campaigns mounted to ameliorate the conditions in which children lived and worked, the proportion of the total population which was aged fourteen and under never fell below a third and remained for the most part around forty per cent.[66]

After a period of falling child mortality during the eighteenth century, the numbers rose again with the onset of intensive urbanisation: following a period of steadily-rising living

[65] Huck, P. 'Shifts in the Seasonality of Infant Deaths in Nine English Towns during the 19th century: A Case for Reduced Breast Feeding?' *Explorations in Economic History* **34** (1997): 373.
[66] Hopkins, *Childhood Transformed*: 161.

standards, Great Britain experienced a mortality crisis in the 1830s and 40s in its rapidly-expanding urban centres. The principal cause for this crisis appears to have been not so much the growth of towns in itself, but the failure of the sanitary infrastructure to keep pace with the increased rate of economic activity and the rapid migrant flow from the countryside and from Ireland. This led to overcrowding, the accumulation of waste, and polluted water supplies. Children were particularly badly affected by sicknesses including infant diarrhoea, digestive tract problems, typhus, typhoid, and cholera, as well as a resurgence of smallpox, and Szreter describes the way in which the administration of towns was disrupted with the dissolution of the old bourgeois oligarchies which had run them.[67] Wohl emphasises the part played by poor nutrition in undermining the health of mothers and babies in particular,[68] and both authors describe the work done by William Farr, of the Registrar-General's office, in recording and publicising the mortality statistics after the introduction of the civil registration of births, deaths, and marriages in England and Wales in 1837. The statistics raised questions about children and child health which would lead to a vigorous debate about the extent to which the state should intervene in family life. The importance placed by the early Victorians on the health of children from labouring families has been contested by historians of childhood.

It is a matter of some debate as to just when life expectancy began to improve once more, but the dispute appears to be about whether the 1850s or the 1870s mark the beginning of this process. Moreover, and of crucial importance to this study, mortality among children under the age of five was unaffected by this trend and did not begin to decline until the very end of the nineteenth century.[69] In 1839-40, the infant mortality rate stood at 153 per 1,000 live births and remained around this level for the next forty

[67] Szreter, S. 'Rapid economic growth and "the four Ds" of disruption, deprivation, disease and death: public health lessons from nineteenth-century Britain for twenty-first-century China?' *Tropical Medicine and International Health,* **4** (2) (February, 1999): 146-152.
[68] Wohl, A.S. *Endangered Lives: Public Health in Victorian Britain.* (London: Dent, 1983).
[69] Szreter, S. 'Author response: debating mortality trends in 19th-century Britain,' in *International Journal of Epidemiology*, **33**, No. 4: 705-9.

years.[70] Smith points to another complication in the narrative: while at a level which was increasingly regarded as being unacceptably high, infant and child mortality in Britain, the world leader in industrial development and urbanisation, were the lowest in Europe, with the exception of Scandinavia. While the death rate might have been higher than the British people had been accustomed to and were prepared to regard as acceptable, it is necessary to look beyond the standard interpretations in order to explain it. Discussing the difference in infant mortality between social classes, for example, Smith explains that the middle and upper classes would often engage the services of wet-nurses for their children. These nurses would be required to live in with their employers, thus removing the temptation for them to suckle their own young. The result was that children from better-off families were more likely to be breast-fed, while those from the poorest classes were disproportionately likely to be given unsatisfactory substitute feeds.[71]

The high infant and child mortality rates had an impact on attitudes towards the provision of health care for the very young. Cruikshank states that by 1841 in the Lancashire town of Preston a half of all children died before reaching their fifth birthday, and that three quarters of those who died were under two years old.[72] Assuming that similar conditions applied across a range of mill towns this helps to explain why such a high proportion of patients at the Manchester Dispensary for Children were so young. This was to remain a problem, since the original intention of hospitals such as Great Ormond Street was to exclude children under two years of age, although this would prove to be unsustainable.[73] Cruikshank describes the increasing interest in demographic statistics, citing the work of John Roberton in plotting patterns of ill-health in Manchester. She also examines the contribution which the burden of caring for children, and particularly sick children, made to the high levels of infanticide which had been revealed by social investigations in the second and third quarters of the

[70] Horn, *The Victorian Town Child*: 128.
[71] Smith, F.B. *The People's Health, 1830-1910*. (London: Croom Helm, 1979): 65-135.
[72] Cruickshank, *Children and Industry:* 62.
[73] 'Proposed Hospital for Sick Children', *Lancet*, **13**, 22.3.1851: 331.

nineteenth century. She quotes the statistician William Farr on the subject of unnecessary mortality – 'in Manchester…13,362 children perished in seven years over and above the mortality natural to mankind' and describes the inadequacies of midwives and the changing patterns of infectious disease. [74]

The statistics collated by Farr exemplify the kind of evidence whose systematic collection formed the basis for the development of an academic discipline of child health. This took some considerable time and delayed the process of reform even while the need for such an innovation was widely acknowledged. A number of advances in knowledge about children's health and development were also gained through factory medicine in the 1830s but not assimilated by mainstream medicine for another twenty years. A great deal of emphasis continued to be placed on the extent to which bad air, resulting from poor ventilation, prevented bodies from replenishing their vitality.[75] The debate over the causes of ill-health is summarised by the range of explanations which were put forward for the existence of scrofula, a common childhood malady:[76] some explained it as a product of poverty, a view favoured by the Health of Towns commissioners; others followed Chadwick in blaming domestic squalor, which they viewed as evidence of moral shortcomings rather than poverty; other views which would be investigated would be variations in climate (in the 1850s the *Lancet* carried a series of articles analysing recent outbreaks of disease in terms of the local weather conditions and attempting to find coherent patterns), and the possibility that the cause might be hereditary, an idea which would later develop into the theory of degeneration, which reached its greatest level of influence in the Edwardian era.[77] The traditional medical consensus was that health was a multifactorial phenomenon, influenced not only by the patient's own qualities but by externals such as diet, daily routine, weather, even the colours in the patient's clothing and environment. Securing an accurate

[74] Cruikshank, *Children and Industry:* 64.
[75] Hamlin, *Public Health and Social Justice*: 40.
[76] Hamlin, *Public Health and Social Justice*: 230.
[77] Soloway, R. 'Counting the Degenerates: The Statistics of Race Degeneration in Edwardian England,' in *Journal of Contemporary History,* **17** (1), Jan. 1982:137-164.

diagnosis involved the taking of an elaborate verbal history from the patient. It was judged that children were incapable of supplying this accurately, and so no diagnosis could be made and no treatment offered.[78] It was this judgement that was being challenged by the collation and interpretation of objective, physically-observed medical evidence.

Many of the standard works cited above agree that the principal causes of child morbidity and mortality were overcrowded housing, harsh working conditions and excessive hours worked, poverty, and parental neglect. They are quick to condemn the system under which these conditions flourished, and tend to agree on a narrative by which a number of heroic reformers managed to impose public health reforms of housing, sewerage, refuse removal, and the supply of fresh water onto a reluctant middle class. They often underestimate the extent to which many influential members of society deplored what they saw but were at a loss as to knowing what might be done to ameliorate the situation. There was in fact a desire for action, but reform had to be preceded by a period during which the decision-makers tried to understand what was happening; once the evidence became plain they were not slow to act.

An alternative explanation for the increasing interest in reforming public health is presented by Ivan Illich, who sees the 1815 Congress of Vienna, at the end of the Napoleonic Wars, as marking the death of any hopes for reforming society through political revolution. He suggests that reformers put their trust instead in doctors, and that 'disease was thus accommodated to administrative management'.[79] In other words, if political change could not alleviate the lot of the ordinary man, then maybe medicine could, but this would have to be a properly-managed process. He points to the proliferation of hospitals and medical schools after 1815, and to the way the location of medicine moved from the domestic bedside to the institutional clinic, while its focus was transferred from personal suffering to the objective identification of

[78] Porter, D. & Porter, R. *Patient's Progress.* (Stanford, Ca.: Stanford University Press, 1989).
[79] Illich, *Limits to Medicine:* 159.

specific disease entities, the aim now being cure rather than palliation. Some evidence relating specifically to children's hospitals which supports this view comes from Manchester, where two of the doctors most closely associated with the foundation of children's hospitals in the city, August Schoepf Merei and Louis Borchardt, arrived there as political exiles, having been closely associated with the failed liberal revolutions of 1848 in Austria and Prussia.[80] Borchardt's political activities continued after he settled in Manchester. It is from this period that the very idea of normality (and hence abnormality, and being in need of correction) derives. 'Until the 1830s, “normal” meant standing at a right angle to the ground. By the 1840s it came to designate conformity to a common type'.[81] The 1830s and the 1840s were the period in which all manner of statistical investigations were undertaken and efforts made to establish norms for, among other things, growth and mortality, from which the public health movement drew strength.

Alongside the public health narrative runs the traditional medical history narrative and the transition from 'caring to curing' – in other words, hospitals were mere places of refuge until modern medicine made effective therapeutic intervention possible.[82] Granshaw describes some of the many ways in which hospitals changed in the first half of the nineteenth century, including: the institutionalisation of existing practices of hospital-based teaching, following the 1815 Apothecaries’ Act; the rapid increase in the number of hospitals claiming specialised knowledge in some aspect of medicine (including, in due course, children’s hospitals); and the beginnings of the expansion of surgery, even before the introduction of anaesthesia and antiseptic techniques.[83] All this is said to have led to hospital care becoming much more interventionist, and this narrative is visible in Lomax as well as Youngson.[84] The evidence shows, however, that these two movements, public health and hospital reform, intersected in the 1840s

[80] These men are discussed at length in Chapter 5.
[81] Illich, *Limits to Medicine:* 164.
[82] Brunton, D. *Medicine Transformed: Health, Disease and Society in Europe 1800-1930.* (Manchester: Manchester University Press, 2004): 35.
[83] Granshaw, L. ‘The Hospital’, in Bynum, WF. & Porter, R. *Companion Encyclopedia of the History of Medicine.* (London: Routledge, 1993): 1180-1203.
[84] Youngson, A.J. *The Scientific Revolution in Victorian Medicine.* (London: Croom Helm, 1979).

and 1850s, leading to the creation of children's hospitals which aimed to take an active role in improving children's health, but to do so by methods which were more closely linked to the public health movement than to the therapeutic medicine which would emerge in subsequent decades. Only as anaesthesia and, more particularly, antiseptic surgery made active interventions more successful after the 1860s did hospitals come to be dominated by therapeutic concerns.

1.5 Hospital histories

Whilst a great many histories of individual institutions have been published, comparatively little attention has been paid to the emergence of children's hospitals as a phenomenon. The topic has been addressed in passing or as part of a broader survey, as by Pickstone,[85] and has had occasional chapters devoted to it. Franklin,[86] for example, describes the barriers to the admission of children to voluntary hospitals, but provides more narrative than analysis. Seidler's brief account, on the other hand, identifies the purposes of the first children's hospitals as being medical training and research, with healing only coming to the fore at a later date.[87] Abel-Smith illustrates the low priority given to children's health by many medical historians; in a work of 502 pages he devotes just five to children and children's hospitals. He describes the objections which were frequently raised to the admission of children to hospital, namely their heightened tendency to suffer from infectious diseases and the reluctance of society to part a sick child from its mother, even for the purposes of treatment.[88] He later repeats this point when describing the opening of GOSH, which initially excluded infants and children under two years of age as in-patients for this reason. Insofar as he offers any analysis of the role of the new hospital, Abel-Smith explains it as being for

[85] Pickstone, J.V. *Medicine and Industrial Society: A History of Hospital Development in Manchester and its Region, 1752-1946.* (Manchester: Manchester University Press, 1985).
[86] Franklin, A.W. 'Children's Hospitals', in Poynter, F.N.L. *The Evolution of Hospitals in Britain.* (London: Pitman Medical, 1964): 103-121.
[87] Seidler, E. 'An historical survey of children's hospitals': 181-197.
[88] Abel-Smith, *The Hospitals:* 13-14.

the treatment of conditions which were not receiving adequate attention in existing institutions. He says nothing about research or teaching.[89]

There remains the question as to what medicine at that time might have to offer to young children. Porter and Porter explain that sickness was viewed as a defining characteristic of infancy, and thus not considered worthy of comment,[90] and Pickstone shows that while children were eligible for care in the dispensaries before 1850, they were relatively rarely seen. In lieu of explanation he states 'Exactly why we do not know', and leaves the matter there.[91] In his history of the voluntary hospital system, Woodward gives a brief section to show that young children were, at least in principle, excluded from admission to voluntary hospitals, but makes no mention at all of the series of voluntary hospitals which opened specifically for young children after 1852.[92]

On the other hand, such histories of the children's hospital movement as have been published in English, be they institutional histories of specific hospitals such as that at Great Ormond Street,[93] or broader surveys such as that by Lomax,[94] make little use of comparable studies which have been published overseas. Much of the pioneering work in establishing children's hospitals and providing the theories to underpin them was undertaken in the German-speaking lands, where they emerged some fifteen years before the opening of GOSH. There is a limited amount of secondary material relating to the origins of children's hospitals here, but this material makes clear the wide range of motives which inspired the creation of these institutions, and the many different forms which they took, and it is against this background that it is possible to discern the distinctive nature of the British model to which Charles West and his successors aspired. The first account is by Hügel, who recognised the significance of the new institutions and set out to describe their origins, philosophy, and current

[89] Abel-Smith, *The Hospitals*: 25.
[90] Porter, R. & Porter, D. *In Sickness and in Health.* (London: Fourth Estate, 1988): 79.
[91] Pickstone, *Medicine and Industrial Society*: 53.
[92] Woodward, J. *To Do the Sick No Harm: A study of the British voluntary hospital system to 1875.* (London: Routledge and Kegan Paul, 1974): 45 ff.
[93] For example Mercer, & Mercer, *Children First and Always.*
[94] Lomax, *Small and Special.*

provision, in the course of which he highlighted individual differences of emphasis but deliberately avoided any kind of synthesis in order not to appear to be passing judgement on individual institutions.[95] Corzelius has produced an overview of children's hospitals in the German-speaking lands which is largely descriptive, but which does provide some brief insight into the thinking of hospital founders such as Mauthner.[96] An institutional survey is offered by Reyer,[97] whilst other histories are scarce, but include some brief biographies of influential individuals by Oehme.[98] Miller's institutional history of the Munich children's hospitals is both descriptive and unpublished.[99]

It was in the German-speaking parts of central Europe that the medical treatment of children was first approached systematically, and the first specialist hospitals opened there fifteen years before that at Great Ormond Street. From the outset, German-speaking medical communities recognised the need for child health to receive academic attention and acknowledged the benefits to be gained from placing the study into the context of academic institutions. The contribution made to the field by German publications, particularly in the 1840s, is clear from the British medical press of the period, but their influence is less apparent in the accounts of subsequent historians writing in English. The principal assumption which justifies the creation of separate hospitals for children is that children's health and care needs are in some way distinct from those of adults, and yet English-language historians who have written about children's hospitals have tended to assume that these institutions are fundamentally similar to ones for adults in terms of their aims and methods, and are merely directed at a different section of the market. Existing historical accounts are, therefore, far from clear as to the medical, as opposed to the business, case for opening children's hospitals.

[95] Hügel, *Beschreibung sämmtlicher Kinderheilanstalten.*
[96] Corzelius, *Private Kinderkrankenhäuser.*.
[97] Reyer, 'Geschichte frühpädagogische Institutionen'.
[98] Oehme, *Pioniere der Kinderheilkunde*.
[99] Miller, *Zur Geschichte Münchner Krankenhäuser.*

Levene *et al* show that during the eighteenth century some children were admitted to general voluntary hospitals, not merely for acknowledged surgical procedures such as treating fractures, but also for medical care and even for the care of fevers.[100] They claim that it was the ultimate failure of this provision which led in the nineteenth century to the creation of specialist hospitals for children.[101] Statistics cited by Digby demonstrate that by the middle of the nineteenth century the number of children being admitted to voluntary hospitals as in-patients was insignificant.[102] Digby's study, like Pickstone's, considers hospital (and other healthcare) provision in terms of the 'medical marketplace', a theme taken up by Lomax in the most comprehensive study to date of children's hospitals in Britain.[103] Lomax examines the creation of children's hospitals in the context of the emergence of other specialist institutions, which provided entrepreneurial opportunities for professional advancement for 'medical outsiders' who, by virtue of nationality, religion, or social class, were unable to thrive in the professional mainstream. In this she differs markedly from Seidler, who sees the new hospitals as having a distinct medical mission, that being medical research and training rather than the personal and social advancement of individual physicians.

Histories of British children's hospitals are mostly celebratory. One exception is Higgins' history of GOSH, which provides detailed explanation in addition to a chronology, although like many other hospital histories it makes assumptions as to the primarily therapeutic character of the institution.[104] The appearance of Higgins' work coincided with the centenary of the hospital's opening, and it is the case with many such histories that their publication is linked either to an anniversary or appeal for funds, and as such they are aimed at a popular rather than academic audience; this

[100] Levene, A., Reinarz, J., and Williams, A. (2012) 'Child Patients, Hospitals and the Home in Eighteenth-Century England', *Family and Community History*, **15**:1, April, 2012: 15-33.
[101] Levene, A., Reinarz, J., Thornton, S., & Williams, A. 'Who let them in? Eighteenth century hospital care for children in England and Scotland: a multicentre preliminary enquiry', in *Archives of Disease in Childhood*, **92** (suppl. 1) April 2007: A67.
[102] Digby, A. *Making a Medical Living: Doctors and patients in the English market for medicine, 1720-1911.* (Cambridge: Cambridge University Press, 1994): 285.
[103] Lomax, *Small and Special.*
[104] Higgins, T.T. *Great Ormond Street.* (London: Odhams Press, 1952).

approach is exemplified by Mercer and Mercer.[105] Kosky and Lunnon describe the conditions which led to the opening of GOSH without explaining how it would ameliorate the suffering which such conditions caused, writing in the apparent assumption that the existence of a children's hospital would in itself serve this purpose.[106] Telfer explains the hospital's foundation in terms of the need for more specialised care and treatment, although the foreword makes clear the significance of research as a basis for advances in treatment.[107]

In keeping with its pioneering role, GOSH has received the greatest amount of attention from historians. The next children's hospital to open, the Jenny Lind in Norwich (1853) is the subject of a short pamphlet[108] and a number of pieces by Lindsay, including a PhD thesis[109] and subsequent history,[110] whose examination of the hospital's origins focuses on the significant role of civic politics in its foundation; Lindsay has also described the hospital's origins in a book chapter.[111] The contested origins of the Liverpool Children's Hospital (1851/6) are examined by Ward,[112] whose examination of the scanty and sometimes contradictory evidence helps explain why the official history says very little about the hospital's early years.[113] It is the case that many hospital histories explain the past in terms of the assumptions of the present, rather than attempting to understand the motives of the founders, and this is to a large extent the case with Barnes' account of the Manchester Children's Hospital (1854).[114] Evans,

[105] Mercer, & Mercer. *Children First and Always.*
[106] Kosky, & Lunnon, *Great Ormond Street and the Story of Medicine.*
[107] Telfer, K. *The Remarkable Story of Great Ormond Street Hospital.* (London: Simon & Schuster, 2008).
[108] *A History of the Jenny Lind Hospital for Sick Children.* (Norwich, 2004).
[109] Lindsay, *Who Cares?*
[110] Lindsay, *The Jenny*.
[111] Lindsay, 'Child Care in an infirmary in Norwich: 327-246.
[112] Ward, C.*The Liverpool Infirmary for Children, 1851-1920,* at http://www.lmi.org.uk/Data/10/Docs/18/18Ward.pdf - accessed 6.7.2011.
[113] Claydon, *The Story of the Royal Liverpool Children's Hospital.*
[114] Barnes, *Hospitals and Childhood.*

on the other hand, does discuss the importance of developmental research as a motive for the foundation of the Manchester Clinical Hospital (1856).[115]

Birrell's short history of the Royal Hospital for Sick Children in Edinburgh was published in 1995 to mark the centenary of its move to its current building. It contains a certain amount of information about the early years, but in a conversational style, and dwelling more on the nursing history of the early years than on medical or administrative aspects.[116] Guthrie's history commemorates the centenary of the hospital's foundation and is a relatively brief and celebratory account.[117]

1.6 Conclusion

The central issue in general histories of childhood in the nineteenth century has been the recognition of childhood as a distinct phase of life, and despite the work of individuals such as Zelizer and DeMause, the predominant approach to the history of childhood has been a series of variations on social constructionism. While Stone emphasises the importance of parents' values and belief-systems in shaping their attitudes towards their children, Postman makes the point that it was the introduction of movable-type printing, enabling the spread of mass literacy, which began the clear separation of the child's world from that of the adult. It will be seen that these two strands, the social and the technological, continued to be important influences on the new view of childhood which emerged in the mid-nineteenth century as a result on the one hand of a desire for the moral reform of labouring children, and on the other of the investigations which began with factory inspectors and factory surgeons and which provided new insights into the distinctive physical characteristics of childhood.

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[115] Evans, M.L. *A History of the Clinical Hospital for the Diseases of Children (Manchester Northern Hospital) & its Founders, Drs. August Schöpf Merei & James Whitehead.* <http://www.goudges.com/mary/clinhosp/index.html> - accessed 22.03.2007.
[116] Birrell, *A Most Perfect Hospital.*
[117] Guthrie, D.J. *The Royal Edinburgh Hospital for Sick Children, 1860-1960.* (Edinburgh: E. & S. Livingstone, 1960).

While the transformation of childhood has been studied extensively, this has been done mainly in terms of the moral and social welfare of children rather than their physical and medical well-being. Social historians such as Walvin and Horn, and historians of child labour such as Pinchbeck, Hewitt, and the Frows, have favoured themes including poverty, exploitation, and child labour, and while historians of medicine have shown that child health was a problem and was recognised as such, they have not yet analysed the problem in significant depth. Steedman, Cruikshank, and Dwork have all touched upon child health more or less peripherally, but there are few scholarly studies of children's hospitals, and most are brief. Pickstone and Lomax agree in seeing them as an entrepreneurial specialism based on the need to establish a lucrative private practice, whereas Seidler envisages an emerging view in which the State has an independent claim over the child as a social asset in need of protection.

The German work of Miller and Corzelius, following Hügel's great European survey, is more descriptive than analytical, and despite the clear evidence which exists of there having been an extensive network of links between promoters of children's hospitals across Europe in the mid-nineteenth century, the English-language historiography relating to the European dimension of the movement for children's hospitals is even more deficient than that for Britain.

This study will analyse both the domestic and foreign influences which formed the basis of the first wave of children's hospitals in Britain. It will also examine the process by which younger children came to be regarded as qualitatively different from older children and adults, with their own separate medical, dietary, and emotional needs. Finally, it will consider the distinctive aims of these hospitals which connect them more with the public health movement than with specialist medical intervention.

2. The Discovery of the Sick Child

2.1 Introduction

The intolerable stress which caring for a sick child placed upon a poor family was of great concern to Charles West, one of the founders of Great Ormond Street Hospital. In 1854 he wrote that

> "the case for the hospital starts with tables of mortality but goes beyond them to cover the burden that a sick child places on the family, so much so that its death can bring a kind of relief."[1]

It is well-established that investigations which were undertaken into the living and working conditions of the poor in the first half of the nineteenth century revealed the degree of squalor in which a large proportion of the labouring classes existed, and demonstrated the consequences for their health and life expectancy. The narrative shows how rising public concern led to demands for intervention to ameliorate the worst of these conditions, giving rise to sanitary reform and what we refer to as the public health movement. This chapter will examine the work of the Manchester statisticians Gaskell, Roberton, Kay, whose work has been acknowledged but possibly underestimated by many historians of childhood in this period. It will then consider the reports of William Farr at the General Register Office and argue that these had a greater role in contributing to a new way of understanding child health than they are generally given credit for.

The chapter will show how the emerging interest in demographic statistics which developed from the 1820s onwards not only shaped the broader public health movement, but more specifically contributed to a changing understanding of the nature of early childhood itself, helping eventually to persuade the medical professions of the both the possibility and the necessity of intervening meaningfully to improve the health

[1] West, C. *How to Nurse Sick Children; Intended especially as a help to the nurses at the hospital for sick children: but containing directions which may be found of service to all who have charge of the young.* (London: Longman, Pearson, Green, and Longmans, 1854): 4.

of young children. The development of techniques of statistical analysis ran alongside series of great social enquiries which examined both quantitative and qualitative evidence regarding the living and working conditions of the poor, and especially (and increasingly) of poor children. Out of these enquiries grew a sense that children were qualitatively different from adults and that they had their own needs and interests which could only be satisfied by approaches which recognised this distinctiveness. Hospitals created especially for young children offered the possibility of pursuing such a distinctive approach and of gathering further evidence in quantities which would be statistically meaningful.

2.2 The Manchester Investigations

During the decade or so from the end of the 1820s there was a debate between three Manchester doctors, Peter Gaskell, John Roberton, and James Kay, which highlighted a range of attitudes and responses to urban poverty, squalor, and ill-health. These attitudes were embodied in political philosophies which also came to shape people's understanding of where responsibility for children lay, whether as adjuncts of parents and families or as independent charges of the state. From this arose the question as to what, if anything, was to be done if there was significant ill-health to be found among the nation's children, and whose responsibility it was to do it.

Tories had traditionally believed in the duty of the landowner or employer to look after the interests of his tenants or employees in a paternalistic fashion. This was a reflection of the Christian view of the family as a structure ordained by God. Just as heads of families had a duty to those in their care, so the upper classes did to the lower. The State had no place interfering in family matters – hence the reason that measures against cruelty to animals predated those against cruelty to children by more than half a century.[2] Twentieth-century histories of the period tend to begin with a

[2] Roberts, D. 'Tory Paternalism and Social Reform in Early Victorian England', *The American Historical Review*, **63** (2) (Jan. 1958): 323-337.

Whig or Radical critique of this view, before moving towards an overtly Marxist perspective such as that of Thompson.[3] Radicals, on the other hand, argued for greater empowerment of those at the bottom of society and against allowing custom and privilege to stand in the way of reform. In reality, strange alliances could follow, with Tory paternalists standing on one occasion alongside Liberal Utilitarians against State encroachment into family life, or on another with Radical factory reformers against laissez-faire Liberal mill-owners. Indeed, examining the case of the Oldham area, which returned to Parliament Radical MPs including John Fielden, Gadian argues that Radicalism reinvigorated Toryism in the area, and that more conventional attempts to portray Liberal politics as the inheritor of the Radical tradition in that area are far from the truth.[4]

The competing philosophies which underlay the debates about urban health in the 1830s and 1840s are illustrated by the writings and disputes of social investigators such as Gaskell, Roberton, and Kay, all of whom were active in the North-West of England and especially in Manchester. Having agreed that there appeared to be a health crisis among the urban labouring population, and that more information was needed in order to determine what might be done about it, they differed in their analyses of underlying causes. An important question was whether reformers' efforts should be directed towards supporting or restoring established social structures such as the family and the relationship between millowner and worker, or whether it was necessary to reform them in order to focus more effectively on the needs of the individual. The answer to this question was influenced by reformers' views of the place of children within the greater scheme of reform – either as the responsibility of their parents, who should be enabled and required to care for them, or as the objects of direct intervention by the public authorities.

[3] Thompson, E.P. *The Making of the English Working Class).* (Harmondsworth: Penguin, 1991, new ed).
[4] Gadian, D. 'Radicalism and Liberalism in Oldham: A Study of Conflict, Continuity and Change in Popular Politics, 1830-52', in *Social History* **21** (3) (Oct. 1996): 265-280.

The speed of socio-economic change was commented upon by Peter Gaskell, a surgeon living in Stockport who wrote a long, detailed, and wide-ranging account of the manufacturing population of England which he published in 1833, just as the first Factory Commission was conducting its investigations. Gaskell wrote that

> 'The conversion of a great people, in little more than the quarter of the century, from agriculturalists to manufacturers, is a phenomenon worthy of the attention of any statesman.' [5]

The quality of information which was being made available, even to Parliamentary enquiries, was challenged by Gaskell. He complained that much of the information which had been published in the form of pamphlets was weighted down by opinion and intended to prove a particular point and claimed to be a disinterested observer of the matter, although his subsequent comments would indicate a degree of partisanship. In an indication of the arguments which would be made by the statists he maintained that he had 'studiously confined himself to data', and while demanding that action be taken to remedy the health of the poor insisted that disease first of all be studied:

> '…mere empiricism, even when founded on the purest motives, is dangerous; and when the interest and happiness of a multitude are at stake, a clear and distinct understanding of its wants and failings should precede any attempt to satisfy the one or rectify the other.'[6]

Gaskell was using 'empiricism' in its contemporary derogatory sense, referring to practitioners who worked by trial and error, unfettered by any theoretical or systematic grounding.[7]

The biggest obstacle to Gaskell's undertaking appears to have been the lack of reliable quantitative information. He complained about 'the utter want of any thing approaching

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[5] Gaskell, P. *The Manufacturing Population of England, its Moral, Social, and Physical Conditions, and the Changes which have arisen from the use of Steam Machinery; with an Examination of Infant Labour.* (London: Baldwin and Cradock, 1833): 10.
[6] Gaskell, *The Manufacturing Population of England*: 2-4.
[7] Porter, R. *Quacks*. (Charleston, SC: Tempus, 2001, pbk): 19.

to correct registration', particularly in the manufacturing districts where many of the population belonged to Dissenting sects and had no association with the registration procedures of the Established Church. He also lamented the lack of information which was kept about the mobility of families. Gaskell was particularly concerned that this information be available to Parliament since the change of its composition following the passing of the Great Reform Act in 1832. He feared that the preponderance of members representing the politically inexperienced commercial class in the new House of Commons would lead to the passing of

> '…crude and badly digested enactments [which] may interfere between the employer and the employed, to the serious injury of both parties….'[8]

Gaskell recognised that the introduction of steam-powered machinery was having social consequences which extended far beyond the factory gate, and he acknowledged that some kind of legislative intervention would be proposed in order to restore harmonious social and labour relationships. As one whose view of society made him naturally suspicious of such interventions, Gaskell wanted to be reassured that any intervention would not be excessive, and the key to this was, he maintained, accurate data with which to inform the decision-making process. Unlike the statists, however, Gaskell believed that this approach would help to defend a laissez-faire economic system.[9] An enlarged and revised second edition of Gaskell's book appeared in 1836, and Pike shows that when he died in 1841, at the age of 35, having failed either to develop and promote his work or to acquire the social and political connections which he would have required to do so effectively. Nevertheless, his principal intellectual legacy was the influence his book had on Friedrich Engels, the first part of whose *Condition of the Working Class in England in 1844* drew on Gaskell's narrative and polemical approach.[10]

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[8] Gaskell, *The Manufacturing Population of England*: 11.
[9] Gaskell, *The Manufacturing Population of England*: 13.
[10] Pike, E.R. *Human Documents of the Industrial Revolution in Britain*. (London: Routledge, 1966): 22.

Gaskell was not alone in identifying the need for accurate statistical information in quantities large enough to enable meaningful conclusions to be drawn from it. It was in 1833, as Gaskell's book was being published, that James Kay helped to found the Manchester Statistical Society. This was the first organisation in Britain to study social problems systematically and to collect statistics for social purposes. In 1834 it was the first organisation to carry out a house-to-house social survey. The society was by no means a medically-inspired undertaking, its driving force coming from William Langton, a banker, and much of the support being provided by the two Greg brothers, local manufacturers. The Society's first meeting took place at the house of Benjamin Heywood, a banker and Member of Parliament. Whilst few of the members were statisticians in the modern sense, they were interested in improving the state of the people and believed that establishing the facts regarding social problems was a necessary first step.[11] Similar societies were then founded in London (1834) and Liverpool (1837).[12] These cities, in many ways the birthplaces of the public health movement, would subsequently house four of the first five children's hospitals in Britain, hospitals in which it will be shown that the collection of accurate information regarding children's diseases was given a degree of importance equal to or even greater than that of treating disease.

Individuals, often medical men such as the Manchester surgeon John Roberton, were investigating the health and living conditions in their districts and publishing their findings. Roberton was appointed as a surgeon at the Manchester Lying-in Charity in the late 1820s, and it was then that he mapped childhood disease in the town. The Manchester Board of Health at this time included a number of medical men, but their interest in child health was centred on the influence of Sunday Schools and promoting better housekeeping, rather than in any broader understanding of the factors

[11] O'Brien, C. *Business Leaders and Society: the originators of the statistical societies of Liverpool, Manchester, London.* (Conference paper, 2004), at http://www.manstatsoc.org/businessleadersandsociety.pdf - accessed 25.7.2011.
[12] O'Brien, *Business Leaders and Society.*

associated with childhood disease.[13] Roberton drew attention to the disparities in health between the urban and rural poor, and in 1831 he published a pamphlet which argued that health and happiness, not wealth, were the true test of political economy.[14] He drew on statistics from the Children's Dispensary to show that significant levels of sickness could be found among children of families who were far from being the community's poorest, and argued strongly against the prevailing belief that the provision of medical charity undermined the poor by taking away their independence. To this extent Roberton's work illustrates Gaskell's complaint about the quantity of opinion accompanying the publication of statistical information, whilst making an argument in favour of greater external intervention to provide assistance for those in the greatest need.

Roberton's statistics were cited time and again over the coming years, and a variety of conclusions drawn from them. James Kay was one who turned them to his own ends. In 1832, Kay published a report about the condition of Manchester textile workers.[15] He described an organic, interdependent view of society and lamented the inadequate attempts which had been made by governments in a number of countries to gather information about their populations. He condemned payment by piece-work, rather than by time spent working, but much of his attack was reserved for the way in which long hours, hard labour, and squalid living conditions combined to prevent people from enjoying a harmonious domestic life, which was necessary to prevent a person from sinking into licentiousness, sloth, and degradation. For Kay, poverty and immorality were inextricably intertwined, and were exacerbated by the 'barbarous habits' of the Irish immigrants who worked alongside native Manchester labourers and passed on their undesirable ways.[16] Although he condemned the 'slovenliness' which he regarded as the first step towards squalor, he also attacked landlords who built poorly and in

[13] Barnes, P.A. *Hospitals and Childhood: A Case Study of the Royal Manchester Children's Hospital "Pendlebury", 1829-1999.* (Manchester University: unpublished MPhil Thesis, 2001).
[14] Pickstone, J.V. *Medicine and Industrial Society: A History of Hospital Development in Manchester and its Region, 1752-1946.* (Manchester: Manchester University Press, 1985): 56.
[15] Kay, J.P. *The Moral and Physical Condition of the Working Classes Employed in the Cotton Manufacture in Manchester.* (London: James Ridgeway, 1832): 7.
[16] Kay, *The Moral and Physical Condition of the Working Classes*: 13.

unsuitable locations, and then overfilled their properties and failed to maintain them in good order. Degradation led to disorderly conduct, including the burning of mills, and he demanded the creation of an effective police force which would maintain order.

Kay attacked the (old) Poor Law for encouraging improvidence and idleness, in that it abolished the need for people to use good times as an opportunity to make provision for bad ones, although he distinguished between the able-bodied poor and the aged, elderly, and infirm, for whom provision was rightly made. Children were not included in his list of exceptions, their care being the responsibility of their able-bodied parents. He complained about the lack of detailed statistical information regarding the administration of the Poor Law, but claimed to be able to show that over four fifths of the population of Manchester received some poor relief during the winter months. His conclusion was that 'pauperism spreads rapidly in an ignorant and demoralized population.'[17]

Kay's concern was that city life was preventing parents from caring for their children as they should, partly because of the requirement that the children work when they should be receiving an education, but also because when parents could rely on charity to care for their children they would tend to neglect their own duties. Girls were denied the opportunity to learn about domestic economy and thus came to perpetuate the cycle of poor childrearing and household management, whilst infants were given into the care of others while their mothers worked. The consequence was that more than 'one half of the offspring of the poor...die before they have completed their fifth year.' The strongest survived, but even they were weakened by the experience. The effects then accumulated over the generations. Kay stressed that his conclusions were based on statistical evidence rather than opinion or hearsay,[18] although these statistics, and the comments about degradation, appear to originate with Roberton's 1829 survey of

[17] Kay, *The Moral and Physical Condition of the Working Classes:* 33.
[18] Kay, *The Moral and Physical Condition of the Working Classes*: 43.

Manchester, and were repeated again in 1833 by Hawkins, one of the Parliamentary Commissioners investigating child labour in the factories.[19]

Kay was thus aware of the effects of poverty and factory work on the lives of the urban working class and made links between poor living conditions and ill-health, and poor domestic management and high infant mortality. These factors would, in time, be used to justify campaigns for children's hospitals as places of education, not just for doctors but, in the words of Charles West, 'all who have the care of the young'.[20] Despite drawing heavily on Roberton's work, Kay drew a very different conclusion, maintaining that charity undermined parents' sense of responsibility. Poverty was clearly a problem, but the answer was that men should be able (and expected) to support their families unaided, while women should be able to concentrate on running the home and raising their children without being under pressure to help support the family financially. Assistance through the Poor Law was described as 'mistaken humanity', in that it further undermined people's self-reliance and limited labour mobility. On the other hand, Kay was clear that employers had a duty to their workers, not only by paying a living wage but by providing facilities such as education, librAriès, and decent housing. Education would not just enable people to be better workers; it would lift their ambitions, so that they could understand that they were 'the architects of their own fortune'.[21] So it was that improvements in infant morbidity and mortality would be brought about by economic and educational means rather than by creating new medical charities.

Kay's view of society was to some extent shared by Gaskell, who disputed the idea that poverty was at the root of ill-health among the working class, maintaining that while handloom weavers could be said to be truly poor, the earnings of the operatives in the textile mills were 'amply sufficient to supply all their wants'. How true that statement was is a matter for another discussion; Gaskell was claiming that the poor state in

[19] Hawkins, B. *Medical Opinions &&&: Extracts from Dr. Hawkins' General Report.* (London: Mills, Jowett, & Mills, 1833), (Leaflet, 13pp): 4.
[20] West, *How to Nurse Sick Children.*
[21] Kay, *The Moral and Physical Condition of the Working Classes*: 62.

which these operatives found themselves was caused by 'the separation of families [and] the breaking up of households'. This led the working man 'to the abandonment of the pure joys of home, and to seek his pleasures and his excitements in pursuits, fatal alike to health and to moral propriety.'[22] Ill-health and squalor were explained, then, in moral rather than in economic terms. The responsibility for rectifying this lay with the employers, who should impose high standards and set a good example.

There was some considerable dispute as to whether free hospital care for the poor had the effect of ameliorating or worsening their condition, and this debate was at least partly informed by use of the new statistical evidence. In 1831 Roberton had published a table in the *North of England Medical and Surgical Journal* which showed how charity midwifery in Manchester had expanded far faster than the birth rate. Kay wrote in 1832 that 'more than one half of [Manchester's] inhabitants are…either so destitute or degraded, as to require the assistance of public charity, in bringing their children into the world.'[23] He resigned from his position at Ancoats Dispensary in 1834 to write an attack on the growth of the midwifery charity for undermining the self-reliance of the poor.[24] In contrast to Kay's hostile attitude, Roberton wrote a letter to the *Manchester Guardian* in which he claimed that Manchester's factory workers were not nearly as well-off as was commonly supposed (a claim which was supported by Kay's Poor Law statistics), and in answer to the claim that the Lying-In Charity was being abused by those who had no need of its help, he asserted

> 'That some – I will even allow that several hundreds out of the 4356 – might provide well enough against the period of delivery, maybe true; but unhappily an overwhelming majority is in a state of incredible destitution...their families are of a *very poor* description, destitute of every comfort and convenience, and generally even of necessary articles. Few of them, probably not one in a hundred, rent an entire cottage. A great proportion live in cellars, and those that live above ground

[22] Gaskell, *The Manufacturing Population of England*: 7-8.
[23] Kay, *The Moral and Physical Condition of the Working Classes*: 42.
[24] Pickstone, *Medicine and Industrial Society*: 81.

are chiefly lodgers; a single family, however numerous, occupying only one apartment.'[25]

The statistical evidence as derived from surveys such as Roberton's, as well as from medical charities and Poor Law institutions, was complex. Poverty, where it amounted to destitution, was undoubtedly detrimental to children's health. What was less clear was any direct link between levels of income and levels of child morbidity and mortality. It was becoming increasingly apparent that environmental factors such as housing and pollution played an important part, as did the ability and willingness of parents to care for their children. Both Tories and Radicals could claim some justification for their views; there was less of a case to be made for liberal utilitarianism as would be exemplified by the New Poor Law. What the Tories and the Radicals had in common was their agreement that where there was a possibility that action could lead to improvement, there was a moral imperative to take that action. Even though medical intervention could do little to influence the course of disease, support for families might, and one of the greatest burdens which the poor family faced was that of caring for a sick child.

Despite the campaigning of radicals such as Roberton, the Tory analysis, that squalor and ill-health were problems of morality rather than poverty, was the prevailing one at this time, and its influence would be seen in the aim expressed by a number of the first children's hospitals of educating parents. It was recognised that children's physical health was suffering as a result both of their working conditions and their domestic circumstances, and the solution was to reform these; none of the documents cited here considers the possibility of extending the provision of medical care to the children of the poor, even though Roberton defended existing midwifery provision. Nevertheless, there was emerging among the Radicals a view of the child in its own right, with its own distinctive views and needs. What was demanded on all sides was more, and more accurate, information as a precursor to any intervention.

[25] Pickstone, *Medicine and Industrial Society*: 79-80.

2.3 Social Inquiries

It was during the 1830s that the statists began to turn their efforts specifically to the well-being of children. Child welfare campaigners had been drawing attention to the Act to abolish slavery in the British Empire which was finally passed in 1833.[26] They wanted the welfare of children to be given as much attention as that of slaves. In 1832, at the height of the Abolitionist campaign, the radical agitator Joseph Livesey published a letter entitled 'The Rights of Infants', which argued that all children had the right to protection, support, and instruction, and that if the family could not or would not provide this then it must be done by society and by every individual within it.[27] It was in the context of this campaign that the 1833 Royal Commission on the Employment of Children in Factories was established in order to inquire into a wide range of aspects relating to children's employment. At this time proposals were being put forward for legislation to restrict children's working hours, and it was intended that the Commission's report would inform the legislators' deliberations. The approach was highly systematic, with seventeen pages of instructions prescribing standardised interview techniques.[28] These instructions included interview proformas, so that meaningful comparisons could be made. Indeed, the editor of one abstract from the Report refused to include certain reports from the West of England because the commissioners there (including Leonard Horner, later to be a prominent factory inspector) had conducted their enquiries

[26] Thomson, D. *England in the Nineteenth Century.* (Harmondsworth: Penguin, 1950): 88-9.
[27] 'A Lover of Liberty' 'The Rights of Infants' in *The Moral Reformer and Protester against the Vices , Abuses, and Corruptions of the Age,* Vol II, No. 9, September, 1832, pp 291-2.
[28] HM Factories Enquiry Commissioners, *Second report of the Central Board of His Majesty's commissioners appointed to collect information in the manufacturing districts, as to the employment of children in factories, and as to the propriety and means of curtailing the hours of their labour: with minutes of evidence, and reports by the Medical Commissioners.* (London: House of Commons, 1833): 75-91.

> ‘in a manner so unaccountable, so contrary to their instructions, and with such an utter contempt even for appearances, that scarcely a ray of light has been thrown upon the woollen and silk Factories in the West of England.’[29]

Adhering to the prescribed methodology was, then, important, at least for some. It was stressed that comparison should be made between the moral and physical fitness of children who worked in the mills and those who did not.[30] Moreover, interviews were conducted with millowners such as James Kempson, a Philadelphia cotton manufacturer, with a view to comparing conditions among his workers with those to be found in Great Britain.[31] This was a very different approach from the amateur investigations by concerned individuals which had been customary, and demonstrated the increasing willingness among social investigators to look beyond their own national frontiers.

Schweber shows that ‘political arithmetic’ originated in Enlightenment France, but that when it returned in the 1830s it was associated much more closely than hitherto with public hygiene, particularly so in England. Farr had himself been introduced to the concept of public hygiene while studying in France, and his subsequent work reflected this influence, combining as it did empirical study of the causes of illness with cals for government action to address these causes.[32] Farr urged that his approach be adopted by medical practitioners in order to ‘give their profession a swcientific character’,[33] and this philosophy was reflected in the 1841 census, which Nissell describes as the first ‘modern’ census, using detailed and standardised questionnaires,

[29] Hawkins, *Medical Opinions*: 13.
[30] HM Factories Enquiry Commissioners, *First Report of the Central Board of His Majesty’s Commissioners appointed to collect Information in the Manufacturing Districts, as to the EMPLOYMENT OF CHILDREN IN FACTORIES, and as to the Propriety and Means of CURTAILING their HOURS of LABOUR.* (London: House of Commons, 1833): 80.
[31] HM Factories Enquiry Commissioners, *Second report*: 21.
[32] Schweber, L. *Disciplining Statistics.* (London: Duke University Press, 2006): 93-4.
[33] Schweber, *Disciplining Statistics*: 96.

measures to avoid double counting, and returning the raw data to the GRO rather than enumerators' [variable] summaries as previously.[34]

The Commission's terms of reference included the general state of health of the children investigated, as well as the effects of employment on their health, whether particular areas of employment were worse than others in this respect, and whether the working hours were suitable. They also considered the current state of children's education and, on the assumption that this was generally poor, 'what specific measure may be proposed for the education of children.'[35] The medical commissioners were to consider factors including the external appearance of children (that is, whether they looked healthy or sickly, robust or delicate, well-formed or ill-formed), as well as comparing their stature with those who had not been brought up to factory work. Other factors to be considered included patterns of sickness among workers, patterns of accidents, as well as types and numbers of births, deaths, deaths in childbirth, abortions, stillborn children, infant mortality, and illegitimate births. Giving an example of a well-run mill in Belper, the inspector Hawkins cited the owner's assertion that in twenty-four years only one of his apprentice girls had been pregnant before marriage, and that in this period there had only been four such cases in the whole mill.[36] Even for a medical inspector, moral well-being was as important as the physical.

Commenting on the long hours worked, the report noted that in many cases both children and adults positively welcomed the opportunity to work additional hours because of the extra money that this brought in, and when asked whether they missed the opportunity to play, children answered that they would rather be earning.[37] The report condemned the use of shared or open privies at some mills, and deplored the extent to which corporal punishment was used on the children and the severity with which it was applied. There was also ample evidence of good practice, with healthy and well-regulated working conditions, good-quality housing, and contented workers.

[34] Nissel, M. *People Count*. (London: HMSO, 1987): 56.
[35] HM Factories Enquiry Commissioners, *First Report*: 75ff.
[36] HM Factories Enquiry Commissioners, *First Report*: 25.
[37] HM Factories Enquiry Commissioners, *First Report*: 7-15.

Maltreatment of children was said to have been at its greatest in Scotland and the North-East of England, while inspectors from other districts reported no evidence of systematic abuses. The worst practices, both in terms of corporal punishment and of squalid working and living conditions, were said to have been found at smaller mills.

The physical consequences of mill-work for children were divided into the immediate and the remote: immediate effects included fatigue, sleepiness, and both acute and chronic discomfort; remote effects included 'deterioration of the physical constitution, deformity, disease, and deficient mental instruction and moral culture.'[38] The evidence from the children which is cited here contradicts that given earlier, in that there is a clear indication of a longing for shorter working hours. The report made it clear that fatigue was not nearly such a problem in western districts, where working hours were shorter – it was customary to allow three meal breaks totalling two and a half hours, compared with Leeds where the breaks might be an hour less.[39] It was observed that pain was less common than fatigue, and that its severity

> 'uniformly bears a strict relation to the tender age of the child and the severity of the labour. Pain is seldom complained of when the labour did not commence until the age of nine.'[40]

Another problem identified as arising from children commencing work at too young an age was their lack of education, since their labour left them too tired to take instruction. As with corporal punishment, this situation was at its worst in Scotland, and the report asserts that there had been a marked deterioration in both children's literacy and their moral character over the recent twelve or fourteen years. One inspector concluded that

> '…the children, with some exceptions, employed in public works, drink, smoke, curse and swear, and are generally very profligate.'[41]

[38] HM Factories Enquiry Commissioners, *First Report*: 25.
[39] HM Factories Enquiry Commissioners, *First Report*: 8.
[40] HM Factories Enquiry Commissioners, *First Report*: 28.

Nevertheless, the report concluded that, taken as a class, the workers in the textile mills were no more likely to be morally deficient than other similar groups, and that such problems as existed could be remedied by education. As for protecting children from abusive employers, the main problem was the failure to enforce existing law. The evidence submitted by medical men stated that ten hours was too long a working day for children under the age of twelve years (but that eight was satisfactory), and that time should be set aside to allow for education. The authors objected that the proposals being made to restrict the working day to ten hours did not distinguish between the protection of adults and that of children and adolescents, whose needs were identified in the report as differing from those of adults. For the purposes of this discussion, 'children' were taken to be those aged between nine and fourteen years,[42] and the case for legislating to protect them was made on the basis that they were not free agents and were unable to protect themselves, and also that their labour was not allocated in proportion to their age, but in the same manner as that of adults. It was on the basis of medical evidence that it was recommended that mills be forbidden to employ children under nine years of age, and that working hours for children aged from nine to fourteen be restricted to eight. The significance of fourteen years was that this was the age at which puberty was identified as commencing, and individuals becoming capable of more protracted labour. Moreover, this was usually the age at which corporal punishment was discontinued, and when the child would assume greater control over their wages.[43] The report conceded that these ages were somewhat arbitrary, and that there would be variations between individual children. One difficulty in imposing regulation of the kind proposed was that it would be necessary for parents to provide evidence of their children's ages, and, as the statists were well aware, no such reliable evidence existed in 1833. Nevertheless, the report is significant in that it attempts a normative approach to defining and classifying childhood, an approach based on medical evidence.

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[41] HM Factories Enquiry Commissioners, *First Report*: 31.
[42] HM Factories Enquiry Commissioners, *First Report*: 47.
[43] HM Factories Enquiry Commissioners, *First Report*: 52.

One of the Commissioners was a Dr. Hawkins, who examined conditions in a number of towns such as Belper, Manchester, and Preston. Of these, he found conditions in Manchester to be by far the worst. Making use of statistical evidence and large numbers of interviews he noted the effects of millwork on both children and adults, remarking that harm seemed to be done more by the number of hours worked than by the physical demands of the labour.[44] This is a common observation among commentators of this period. Like Kay, he was concerned by the moral harm done by the millworkers' way of life, whether from the effects of strong drink, both sexes working in close proximity, or the high rate of illegitimate births, factors which seemed to him to be interrelated. Hawkins' method is typical of the new approach attempted by the commissioners. A typical comparison concerns children at a Manchester Sunday School, and he provides a careful breakdown of the figures:

> 'I…took an account of 350 of both sexes not engaged in factories, and 350 of both sexes engaged in factories….Their age varied from nine years to twenty for the most part.
>
> | Of 350 not in factories, | But of 350 in factories, |
> |---|---|
> | 21 had bad health, | 73 had bad health, |
> | 88 had middling health, | 134 had middling health, |
> | 241 had good health | 143 had good health[45] |

Whilst this leaves important questions unanswered, not the least of which would be how he defined 'bad', 'middling', and 'good' health, it illustrates clearly the attempt which was being made at presenting evidence if a form which was susceptible to systematic analysis. Hawkins stated that 'every law for the protection of children will remain ineffectual as long as the present imperfect mode of registering births continues

[44] HM Factories Enquiry Commissioners *Second report*, part D3: 2.
[45] HM Factories Enquiry Commissioners *Second report*, part D3: 2.

in this empire'.[46] A similar point was made by Drinkwater, inspector in Derbyshire, who pointed to the inadequacy of the parochial system for registering deaths.[47] In order to help establish the connection between chronological age and physical maturity Hawkins attempted a crude use of developmental norms to establish the harm done by factory work, by comparing ages at which menstruation began in different populations. If successful, this would help make assessments of age more accurate, whilst building in a factor of adjustment to allow for the differences between different populations which were becoming apparent as a result of the Factory Commission's work. It would also allow comparisons to be made of the health of workers in different occupations. Although this approach was not undertaken as systematically as would later be done by Merei and Whitehead at the Cheetham Hill Clinical Hospital, also in Manchester, it did indicate the beginnings of a more structured approach to evaluating human development.[48]

In describing and classifying the medical problems faced by child labourers, the report takes a wholly environmental approach to aetiology. The assumption is that by moderating the demands of work, providing decent living and working conditions, and ensuring proper moral education the health and well-being of these children could be assured. The conclusions of the Commission challenged the *laissez faire* view of family and worker-employer relationships, explicitly setting out to balance the views of parents, child workers, and millowners, and the desire of reformers to improve the lot of children even if it be against their will.[49]

One reason that such a new approach was becoming possible at this particular time is that not only were textiles being manufactured on an industrial scale, but so were workplace accidents and work-related diseases. Doctors, particularly surgeons, were presented with opportunities for studying large numbers of cases which shared similar aetiologies, and so for the first time could amass statistically-significant evidence. In a

[46] HM Factories Enquiry Commissioners, *Second report*, D3: 6.
[47] HM Factories Enquiry Commissioners, *First Report*, C1: 7.
[48] Hawkins (1833) *Medical Opinions*: 4.
[49] HM Factories Enquiry Commissioners *First Report*.

haphazard way British surgeons were being given opportunities for study analogous to those which had been created systematically in the Paris clinics. Appended to Hawkins' report are short accounts by a number of other doctors from industrial districts, all of whom were able to identify similar patterns of disease. This large-scale medical surveillance was contributing to a changing understanding of medicine, whereby illness was ceasing to be seen as a personal phenomenon, unique to every individual. The benefits of large-scale surveillance would form part of the case for opening children's hospitals.[50] This aspect of children's hospitals is discussed further in chapters Four and Five.

There is evidence of investigatory practices improving as experience was gained. For example, Leonard Horner, one of the Commissioners who were so strongly criticised for their failure to adhere to the prescribed methodology, went on to be a Factory Inspector and to undertake his own systematic statistical research. Following the 1833 Factory Act, Horner and other Factory Inspectors began a programme of measuring children's heights, in the hope of establishing norms which would make it possible to estimate their ages. The results showed that between the ages of ten and fourteen the growth of children from towns fell significantly behind that of those from the countryside.[51] These results, collected in 1836-7, were reported to the House of Commons and added to the pressure for action. Horner's approach shows a considerable advance in the development of the normative approach attempted by Hawkins. It was at this stage still used in a quantitative sense; over the next two decades similar methods would be applied to the qualitative assessment of children's development, for example by Merei and Whitehead at the Clinical Hospital in Manchester.[52] It is possible here to detect the beginning of a cycle by which

[50] Hawkins (1833) *Medical Opinions*: 8ff.
[51] Kirby, P. *Height, Urbanisation, and Living Conditions in the north of England, 1822-1837.* (Manchester: Department of History, University of Manchester, 1996).
[52] Review of Merei, A.L. and Whitehead, J. 'Children's Diseases (First Report of the Clinical Hospital, Manchester)', in *Dublin Quarterly Medical Review,* Vol. XXIII, 1856: 182-4.

investigations produced findings, which then raised further questions which informed subsequent investigations.

Horner was one of four Factory Inspectors to report specifically on the educational consequences of the 1833 Factory Act, reflecting his own priorities which lay with education rather than health.[53] He subsequently published his own analysis of the problems associated with the employment of children. He based this on his observations as a Factory Inspector, and made comparisons with investigations and attempts at reform in France, Prussia, Switzerland, Massachusetts, and Russia.[54] This interest in overseas developments foreshadowed a similar outlook which among medical practitioners which would develop as the decade progressed. Reflecting the predominant concern with the moral consequences of child labour, Horner's main objection to children working long hours was that it interfered with their education. He stated that he would be happy for children's working hours to be limited to eight per day provided they were such as to permit a certain amount of daily schooling. He also argued that reducing the amount of strain which employment placed on young children would enable them to grow into stronger adults, and thus better (and more profitable) workers. He likewise argued that the benefit of education was that it enabled a child to grow up to be an 'intelligent, ingenious, honest, and right-principled man, a useful and orderly citizen.'[55] He stated that

> 'The most lamentable consequence of this overworking of children is not the direct injury done to their health…but the annihilation of all moral sentiment, which indeed has no chance of ever being developed.'[56]

[53] Horner, L., Howell, T.J., Saunders, R.J., & Stuart, J. *Reports by the Four Factory Inspectors of the Effects of the Educational Provisions of the Factory Act; together with a Joint Report as to any Modifications of those Provisions.* (Great Britain: House of Commons, 1839).
[54] Horner, L. *On the Employment of Children in Factories and other works in the United Kingdom, and in some Foreign Countries.* (London: Longman, Orme, Brown, Green, and Longmans, 1840).
[55] Horner, *On the Employment of Children in* Factories: 16.
[56] Horner, *On the Employment of Children in Factories*: 65.

This led to children growing up morally weak. If, on the other hand, their spiritual needs were met, then

> 'regularity in manual employment is converted from a servitude into a useful habit of diligence…. A majority of the most useful men who have ever lived were formed under the happy necessity of mingling bodily with mental exertion.'[57]

He went on to condemn the way in which daily, repetitive toil took the place of childish pursuits, defining children as those who were under ten years of age, being 'in the earlier stages of physical development',[58] but he was nevertheless happy to allow the employment of children from the age of eight years provided that suitable educational opportunities were available – in other words, despite his words about physical development, he was less concerned with the medical arguments than with the moral ones. He made comparisons with Prussia, where the minimum age was nine years, but strict educational provisions were enforced, and with the Swiss canton of Aargau, where the minimum age for employment was fourteen.[59] So it was that for Horner, a significant figure in the movement for the reform of child labour, concerns about the physical health of the child took second place to its moral well-being.

In considering the exemption from the 1833 Factory Act which had been granted to silk manufacturers, Horner posed a question which illustrates the change in attitude towards children which was slowly becoming apparent: instead of asking 'What does the interest of silk mill-owners require', the important question was 'What does the interest *of the children* require?' [Horner's italics].[60] Horner also offered an interesting response to those who objected to all such legislation on the grounds that it encroached on parental authority:

> 'Parental authority confers no right on a father wantonly to mutilate the little finger of his child; ought he be permitted to do what is a thousand times worse, to enfeeble

[57] Horner, *On the Employment of Children in Factories*: 118.
[58] Horner, *On the Employment of Children in Factories*: 102.
[59] Horner, *On the Employment of Children in Factories*: 105.
[60] Horner, *On the Employment of Children in Factories*: 6.

him and spread disease throughout his whole frame, to leave him as low in intelligence as a brute, and to infect him with the most dangerous of all pestilences, a corrupt and depraved mind? If the father has his natural rights, so has the child; and if the father robs him of these, the State must become his guardian, and restore them to him.'[61]

This clear articulation of the concept of children as individuals, rather than as adjuncts to their parents, follows the line set out by Livesey and reflects the division which was becoming apparent between the philosophies of radicals such as Livesey and Horner and Tories such as Kay, with his belief in a more organic and hierarchical social structure.

The 1833 Factory Act which followed publication of this Inquiry aroused considerable opposition which extended well beyond the millowners who were immediately affected. In response to demands for the Act's repeal, the radical reformer John Fielden, himself a millowner, wrote passionately in its defence, claiming that its fault lay in the fact that it did not go nearly far enough. Whilst not disputing that children should work, Fielden pointed out that the principle of limitations on the working week had already been conceded in another context: citing the familiar argument about the abolition of slavery, he observed that when slavery was abolished the working week of former slaves was limited to 45 hours, with a maximum of 7½ hours per day, whereas children were permitted to work a 12-hour day. He added:

'What a pity that these 35,000 factory children happen to be white instead of black! If it were not for this mere difference of colour, Mr Thompson [who had objected to the 8-hour working day for children and advocated a 69-hour week] would not have dared to put them without the pale of legislative protection.'[62]

Fielden produced the familiar arguments about the physical damage done by excessive labour and the moral harm which could be wrought by the conditions at the mills (he

[61] Horner, *On the Employment of Children in Factories*: 18.
[62] Fielden, J. *The Curse of the Factory System.* (London: A. Cobbett, 1836): 41.

held that shared privies ‘destroy shame and conduce to immorality’), but more strikingly he also discussed children as children, rather than merely as young labourers. He noted the complaint of an eight-year-old girl that she had no time for going to play, and quoted approvingly the Factory Inspector Rickards: 'effectual protection should be extended to those who cannot protect themselves'.[63] Here are clear indications of a view of childhood as a phase of life which is qualitatively distinct from that of adulthood, with children having distinct needs such as play and protection from exploitation.

Despite the criticisms of Horner's methodology in the 1833 report, he was recalled for service in the 1842 Children's Employment Commission and was one of the four authors of the Commission's report, which was published in 1843.[64] This was a very detailed account which examined the whole country district by district, looking in turn at a range of industries and using a standard (and extensive) set of criteria to evaluate the physical and moral consequences for children of work in these industries. The findings were summarised under three headings: the physical condition of children working in mines; the physical condition of children working in trades and manufacturing; and the moral condition of children working in mines, trades, and manufacturing. The physical aspects were further broken down into areas including ‘Physical condition of children and young persons employed in coal and iron mines’, ‘Immediate effects of overworking’, ‘Extraordinary muscle development’, ‘Stunted growth’, ‘crippled gait’, ‘Irritation of the head, back, &c.’, ‘Diseases’, and ‘Premature old age and death’. Subdivisions of moral well-being included ‘Means of instruction’, ‘Attendance at public worship’, ‘Inefficiency of day-school teachers’, ‘Inefficiency of Sunday-school teachers’, ‘Prevailing ignorance’, and ‘Actual moral state’.[65]

This more structured and targeted approach was made possible by analysis of the information gathered in the much more open survey of 1833. It was noted that work in the mines was characterised by the physical demands of hard labour, leading to well-

[63] Fielden, *The Curse of the Factory System*: 42-3.
[64] House of Commons *The Physical and Moral Condition of the Children and Young Persons Employed in Mines and Manufactures.* (London: John W. Parker, 1843).
[65] House of Commons, *The Physical and Moral Condition...*: v-x.

developed musculature but diminished stature, whereas in manufacturing the problems were related more to the effects of working long hours at a pace dictated by the operation of powered machinery rather than human rhythms. All areas of employment had their associated occupational diseases caused in particular by pollutants in the atmosphere and the specific postures which had to be adopted by workers, and additional problems were caused by poverty which led children to suffer from poor diet and inadequate clothing. There were also concerns raised about housing conditions and the inability or unwillingness of many parents to make sacrifices in the interests of their children's welfare: the report describes the extinction of 'the natural parental instinct to provide, during childhood, for the Child's subsistence'.[66]

The evidence of inspectors such as Hawkins showed that it was not just working conditions that affected children's health, but also their domestic circumstances. Hawkins, who went farther than most of his colleagues in looking at the wider effects of industrialisation such as were found beyond the factory gate, noted the poor environmental conditions which prevailed in Manchester, commenting in particular on the absence of public parks and gardens. He regarded this lack as a contributory factor to the poor health of local millworkers. He also noted the harm done by the workers' frequent resort to strong drink, but conceded that despite his concerns about sexual behaviour, mill-girls were significantly less likely to become prostitutes than were those who had been in domestic service. He was concerned about the effects of work in preventing girls from learning the skills which would enable them to become good wives and mothers, and the dangers posed to young children by unsatisfactory childminding arrangements.[67] These concerns would be taken up in the 1840s by the Commission for Enquiring into the State of Large Towns and Populous Districts, as well

[66] House of Commons, *The Physical and Moral Condition...*: 259.
[67] Factories Enquiry Commission, *Second report*, D3: 3-5.

as by Edwin Chadwick in his *Report on the Sanitary Condition of the Labouring Population of Great Britain* (1842).[68]

The Commission's conclusions regarding the physical health of children employed in the mines were that they varied considerably between different parts of the country and depending upon the type of mineral being extracted, colliers faring the worst. Many of the children and young people were well-paid and well-fed, although this was not the case in every district. Damage to health came not from the nature of the work itself but from over-work and from industrial accidents. The only mention of specific occupational diseases was a single reference to respiratory disease.[69] Following such a detailed enquiry, the conclusions reached about the children's physical health of children employed in manufacturing amounted to a single page of three paragraphs: that many lacked the necessities of everyday life such as 'good and sufficient food' and 'warm and decent clothing; that many were suffering from signs of physical deterioration as a result of long hours of work and lack of food and clothing; and that the commonest diseases were 'disordered states of the nutritive organs, curvature and distortion of the spine, deformity of the limbs, and diseases of the lungs, ending in atrophy and consumption.'[70] The conclusions regarding the children's moral condition cover nine pages and are divided into thirty-five numbered paragraphs. They identify the principal ills as including the lack of education and moral instruction which have been afforded to many of the children, their exposure to undesirable adult influences, and the riotous leisure pursuits to which they are open. They urge that provision be made for the proper education and religious instruction of every child, and that they be allowed sufficient time to benefit without being too fatigued to do so.[71] There are no recommendations concerning the children's physical health.

[68] Chadwick, E. *The Sanitary Condition of the Labouring Population of Great Britain,*(Edinburgh: Edinburgh University Press, M.W. Flinn ed, 1965): 204-5.
[69] House of Commons, *The Physical and Moral Condition…*: 103-5
[70] House of Commons, *The Physical and Moral Condition…*: 149.
[71] House of Commons, *The Physical and Moral Condition…*: 259-68.

Interest in social inquiry quickly spread beyond the question of child labour. The Second Report of the Factories Enquiry Commission, published in 1833, had looked at conditions in Scotland, and the Commissioners, who once again included Hawkins, interpreted their brief a little more widely than they had in England. They included lists of patients in the infirmaries, compared the condition of factory children from Paisley favourably with other children from the town, and also included some reports on the condition of some millworkers' housing.[72] This was an early indication of the realisation that the working conditions of the labouring classes could not be regarded as a wholly separate matter from their living conditions, and in 1840 a Parliamentary Select Committee would enquire into the health of towns in England. This was a far less exhaustive undertaking than those which would follow, but it made recommendations such as the creation of health boards for larger towns. Its main significance, however, was the sheer novelty of its findings, as a result of which Edwin Chadwick was invited by the Poor Law Commissioners to undertake a more systematic survey, which would become his report on *The Sanitary Condition of the Labouring Population of Great Britain*.[73] Chadwick explained that his aim was to consider 'the chief removable circumstances' affecting the health of the poor, and to do so by gathering as much objective evidence as was needed to inform the creation of an effective policy.[74] He concentrated on measures for prevention rather than treatment, and gathered much of his information in person, relying also on reports from medical officers. Whilst he discussed child mortality, Chadwick considered this as one small indicator of the problems faced by poor families generally. He did, however, make one point which would prove significant in building the case for children's hospitals: he described the case of a girls' orphanage which had suffered only one death out of eighty-six children raised over a period of 24 years. These children had come from the very poorest

[72] Factories Enquiry Commission, *Second Report*.
[73] Rosen, G. *A History of Public Health, new edition.* (Baltimore, Md: Johns Hopkins University Press, 1993): 196.
[74] Chadwick, E. 'Results of Different Principles of Legislation and Administration in Europe; of Competition for the Field, as Compared with Competition within the Field, of Service,' in *Journal of the Statistical Society of London*, **22**n (3) September, 1859: 381-420.

backgrounds, and the mortality rate was one sixth of that which might have been expected had they remained with their own families. His conclusion was that proper sanitary management could minimise mortality rates in institutional settings just as much as in domestic ones.[75] It also suggested that one way to improve children's health was to remove them from the conditions which had made them sick in the first place.

The Health of Towns Commission, established in 1843, drew quite different conclusions about child health from those of Chadwick, stressing the harm which was done to children's health by overcrowded, damp, and squalid housing. It took more of an interest than he did in infant mortality, something which could not be explained by occupational causes, and concluded that it could be regarded as a proxy for poverty.[76] Chadwick and others had blamed the lack of training for girls in child care and household management for the high levels of infant mortality; he stated that it was important that the wife keep the home running properly (and, by implication, that she could not do this if she were out at work).[77] He had also demonstrated that infant mortality rates were lower in impoverished rural areas than in more prosperous industrial ones. The Commissioners did, however, provide some support for Chadwick's views about household management, reporting in 1845 that

> 'our attention has been particularly directed to the prevalence of a very injurious practice of administering opiates to young children, calculated to increase the effect of physical causes of disease already pressing with great severity on the infantile part of the population.'[78]

The districts of Preston and Ashton-under-Lyne were cited as areas where this practice was particularly rife. The report suggested that there would be less use of narcotics if

[75] Chadwick, *The Sanitary Condition of the Labouring Population of Great Britain*: 242-4.
[76] Hamlin, C. *Public Health and Social Justice in the Age of Chadwick.* (Cambridge: CUP, 1998): 231.
[77] Hamlin, *Public Health and Social Justice*: 207.
[78] Royal Commission for inquiring into the state of large towns and populous districts. *Report.* (House of Commons Parliamentary Papers 1845 Vol XVIII pp1-91): 4.

the conditions which led to their employment were eliminated, and to this end it proposed improvements in drainage, cleansing, ventilation, and the supply of water, along with addressing over-crowding.

Writing specifically about Preston a year earlier, John Clay, a local clergyman, had linked the question of narcotic use to the difficulties faced by working mothers:

> 'The [mother], while working in the factory, intrusts [*sic*] her infant to an old woman or young girl, who may also have the charge of other infants; and this general nurse, in order to fulfil her task with as much ease to herself as possible, drugs the unfortunate babies with “Quietness”.'[79]

Farr had commented on this problem in 1843, claiming that the statistics concerning deaths in childbirth made a strong case for, among other things, the establishment of training schools for nurses and midwives. In this respect he compared Britain unfavourably with France and Prussia, which had state-sponsored schemes for training midwives, and he stressed that this should not just be for the benefit of upper- and middle-class families, since

> 'the labourer or artisan would find the attendance of the nurses, who had availed themselves of the moderate education adverted to above, of great use in the sickness of his wife, and really less costly than the spirit-drinking nurses now met with, who sometimes demoralize the mother, and poison her children.'[80]

Clay used statistics to bring home to the reader the consequences of the disadvantages faced by the poor of Preston:

> 'If the infant population of the working class could have been reared amidst the advantages of food, air, attention &c., which are afforded to the offspring of the

[79] Clay, J. 'Report on the Sanatory [sic] Condition of Preston', in GREAT BRITAIN, Royal Commission for inquiring into the state of large towns and populous districts (1844) *First Report*: 46.
[80] Great Britain, Registrar General, *Fifth Annual Report of the Registrar General of Births, Deaths, and Marriages in England.* (London: HMSO, 1844): 186.

upper class; during the last six years, 3034 children would have reached five years of age, who, as it is, have been prematurely swept away by disease.'[81]

Whilst conceding the harm done to both young and old by filth, poor drainage, and lack of fresh air, Clay maintained that these factors were particularly injurious to children, and that their effects were made still worse by 'the ignorance, indifference, neglect, or selfishness of parents.'[82] Clay went even further, though, implying that the deaths of so many children resulted not just from omissions or failures by their parents, but from incentives for the poorest families to allow sick children to die:

'The burial clubs enrol 12 to 15 times as many members as the sick clubs, inducing the inference that the prospect to a poor person of support and assistance in illness is less desirable than the possession of £5, £10, or £15 on the decease of his child.'[83]

It is the work of concerned individuals such as Clay, just as much of those in positions of authority, which demonstrates the extent to which the public health argument was gaining the support of educated professionals.

In summary, between the early 1830s and the later 1840s there had been a growth in attention to the welfare of children, and a certain, if limited, shift in emphasis from the moral to the physical. There was also a dawning recognition that the growing desire to do something to improve child health might involve some element of State intervention. This implied a recognition of the fact that children were in some way distinct from adults, and would require some objective way of identifying them. There were particular concerns that children were coming to harm as a consequence of industrial society as the public health movement made links between environment and ill health. It followed, went the argument, that not only children's workplaces, but also their domestic environments needed to be reformed.

[81] Clay, 'Report on the Sanatory Condition of Preston': 39.
[82] Clay, 'Report on the Sanatory Condition of Preston': 45-6.
[83] Clay, 'Report on the Sanatory Condition of Preston': 49.

2.4 William Farr and the General Register Office

The origins of the statistical movement are well-enough known. By around 1830 there was emerging what would become the study of demography. The growth of the public health movement in Great Britain coincided with, and was in large part the result of, the emergence of the first reliable statistics about morbidity and mortality. This section will show that, beginning with isolated studies by concerned individuals, often medical men, the new approach was quickly taken up by Parliament, which launched a series of investigations into the living and working conditions of the lower classes, and by groups of learned men who founded associations where they could meet regularly to discuss their findings and plan further investigations. Chapter One has analysed some ways in which historians have sought to explain the consequences for young children of industrialisation and urbanisation. Out of the collection and interpretation of demographic statistics would come an attempt to create a new rational approach to questions of running the state, statism, and the information which would underpin this was known as statistics; the precise usage of these terms was subsequently debated by the statistician William Farr.[84] Historical accounts of this process have tended to concentrate on its impact in enabling reformers to understand and therefore to ameliorate the environmental impact of industrialisation, whilst underestimating its impact on physicians' understanding of health and disease.[85]

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[84] Farr, W. *Report of the Proceedings of the Fourth Session of the International Statistical Congress.* (London: HMSO, 1860): 148

[85] See, for example, Aspin, C. *Lancashire: The First Industrial Society.* (Preston: Carnegie Publishing, 2ed. 1995); Cruikshank, M. *Children and Industry: Child Health and Welfare in North-West Textile Towns in the Nineteenth Century.* (Manchester: Manchester University Press, 1991); Frow, E. & Frow, R. *A Survey of the Half-Time System in Education.* (Manchester: E.J. Morten, 1970); Horn, P. *Children's Work and Welfare, 1780-1890.* (Kineton: The Roundwood Press, 1974); and Pinchbeck, I. & Hewitt, M. *Children in English Society: Vol. 2, From the Eighteenth Century to the Children Act, 1948.* (London: Routledge and Kegan Paul, 1973).

Goldman shows how a number of influences converged during the 1830s, originating both within and outside government.[86] At the beginning of the decade the conventional use for statistical information was descriptive, the object being to collect numbers which could be presented in tabular form. It was with a view to the collection and presentation of statistics, rather than their analysis, that the Statistical Department of the Board of Trade was established in 1832, while the following year the British Academy acquired its Section F to examine statistics, an innovation which was not wholly pleasing to the natural scientists who formed the Association's membership. It was also in 1833 that the first of a series of provincial statistical societies was formed in Manchester, an event which Goldman links to the attempt to deal with the new threat which was posed by the first cholera epidemic, in 1831-2, and the realisation that more needed to be known about the town's inhabitants if any intervention were to stand a chance of being effective. This link was made explicit by the Manchester reformer James Kay, lamenting the lack of accurate information with which to determine how best to combat the effects of the outbreak.[87] This argument is very similar to the one which would subsequently be advanced by many of the medical men who campaigned for the opening of children's hospitals.

The Act for Registering Births, Deaths and Marriages, 1836, was on the other hand, the product of politics rather than any desire for administrative reform. The Dissenting Churches had objected to the monopoly of the Church of England in the registration of births, marriages, and deaths, and were demanding parity. Their support had been electorally important to the Whig government, which addressed their grievance without removing Anglican religious primacy by making registration a civil matter. Goldman's interpretation is, however, open to challenge in that a common complaint voiced by the Factory Commissioners in 1833 concerned the unsatisfactory nature of the current arrangements for registering births and deaths. Pelling illustrates some of the various

[86] Goldman, L. 'Statistics and the Science of Society in Early Victorian Britain; An Intellectual Context for the General Register Office', in *The Social History of Medicine* (1991) **4** (3): 415-434.
[87] Kay, *The Moral and Physical Condition of the Working Classes… in Manchester.*

interests at work here, explaining that a requirement for the cause of death to be recorded had been included at the insistence of the Provincial Medical and Surgical Association, and the measure had been delayed until 1836, allegedly at Edwin Chadwick's request, in order to be able to take advantage of the districts created for the administration of the New Poor Law.[88]

The Act was strongly opposed by some; foreshadowing debates which would take place around medical innovation in the 1840s and 1850s, the case against civil registration was put by Lord Ellenborough, opposing the new legislation in the House of Lords in 1836. Casting doubt on the possibility of making practical generalisations from large-scale statistical evidence, he declared that the change was being made

> '…just to gratify the statistical fancies of some few philosophers, in order that they might know how many persons died, and how many were born in a year.'[89]

In any event, the Act led to the creation of the General Register Office to collect and, where it was deemed appropriate, to publish the information which was generated by the new process. It was the norm at this time for senior government appointments to be filled on the basis of patronage rather than ability, and the lack of interest which many of the holders of high office showed in the organisations under their command allowed ambitious subordinates to gain considerable influence. At the Statistical Department of the Board of Trade this had been achieved by a group of campaigners for Free Trade, while at the General Register Office the inactivity of the Registrar General, T. H. Lister, allowed William Farr, a physician, to develop his ideas.[90]

There were some who sought to manage the wealth of new information by employing new methods. One pioneer was David Johnston, who drew heavily on work done in France and elsewhere to make comparisons between mortality rates in different

[88] Pelling, M. *Cholera, Fever, and English Medicine 1825-1865.* (Oxford: Oxford University Press, 1978): 82.
[89] Cited in Goldman, 'Statistics and the Science of Society': 418.
[90] Goldman, 'Statistics and the Science of Society': 416

districts. He could only speculate as to the causes of the differences which were becoming apparent, and lamented the absence of accurate statistics for Great Britain. He also noted that the least accurate ones were those pertaining to the poorest classes.[91]

William Farr worked as Compiler of Abstracts at the Office of the Registrar General and had come to prominence because of a chapter he had contributed to McCulloch's *Descriptive and Statistical Account of the British Empire,* published in 1837.[92] The statistical element of this volume largely followed the traditional form of tables of figures, but Farr contributed an analytical piece about the statistics of human health, on the basis of which he was offered a post at the General Register Office (GRO). The Statistical Society of London explained in 1840 that

> 'statistics by their very name are defined to be the observations necessary to the social or moral sciences, to the sciences of the *statist*, to whom the statesman or legislator must resort for the principles on which to legislate and govern…his is the science of the arts of civil life.'[93]

There was a hope that 'the confusion of politics might be replaced by the orderly reign of facts.'[94] Farr had been thinking along these lines for a number of years. In 1832 he had proposed the creation of a statistical society in London, a project which came to fruition in 1834,[95] and in his position as 'compiler of abstracts' at the GRO his introductions to the Annual Reports of the Registrar General became

[91] Johnston, D. *A General, Medical, and Statistical History of the Present Condition of Public Charity in France*, (Edinburgh: Oliver & Boyd, 1829): 394-5.
[92] McCulloch, J.R. *A Statistical Account of the British Empire, examining its extent, physical capacities, population, industry, and civil and religious institutions.* (London: Knight, 1837).
[93] Cited in Goldman, 'Statistics and the Science of Society': 421.
[94] Goldman, 'Statistics and the Science of Society': 422.
[95] O'Brien, *Business Leaders and Society.*

'the vehicle for the passionate expression of personal views, for propaganda directed against the opponents of public health reform, and for agitation for state intervention….'[96]

In his examination of public health policy as applied in six different districts, Lewis suggests that little practical use was made of the evidence found in the GRO reports in the early years, since there were no effective mechanisms in existence for implementing the new ideas.[97] This judgement underestimates the influence which these statistics had, right from the publication of the first Annual Report, in shaping opinion and providing a solid basis for the development of new policies and institutions. Hardy makes a similar point regarding the limited value of the certification of deaths for providing a basis for meaningful comparisons, since the classification and categorisation of disease was so fluid in the 1840s and 1850s.[98] Again, while true up to a point, this objection misses an important development: in the 1830s the concept of disease entities was a relatively new one, and the need for an orderly system of classification stimulated drew attention to the lack of knowledge on which such a system might be based. By 1838 Farr had identified three variable factors influencing rates of morbidity and mortality: the patient; the circumstances; and the disease itself.[99] He used medical statistics to demonstrate that morbidity and mortality are regular, systematic, and predictable. This was a controversial view, and one that would prove at times difficult to sustain as the germ theory of disease, with its range of complicating factors, came to replace the more straightforward environmental explanation.[100] Many English authorities at this time trusted to experience, rather than what they saw as the foreign habit of abstract speculation. This dispute in the emerging field of public health studies mirrored the debate which was taking place in more established areas of

[96] Cited in Goldman, 'Statistics and the Science of Society': 419.
[97] Lewes, F. 'The GRO and the Provinces in the Nineteenth Century', *Social History of Medicine* (1991) **4** (3): 479-496.
[98] Hardy, A. "'Death is the Cure of All Diseases": Using the General Register Office Cause of Death Statistics for 1837-1920', *Social History of Medicine* (1994) **7** (3): 472-492.
[99] Farr. W. 'On Prognosis', in *British Medical Almanack*, 1838; Supplement:199-216; Part 1: 199-208.
[100] Goldman, *Statistics and the Science of Society.*

medical practice over the question of the existence of distinct disease entities. Farr's work would bear fruit in the longer term, however, as his nomenclature and classification of diseases was recognised by the International Statistical Congress in Paris, in 1864.[101]

Looking at Farr's report's in more detail, it can be seen that they developed considerably in their first decade. The significance of the first, covering the year 1837-8, was that it followed the introduction of compulsory civil registration of births, marriages, and death in England and Wales. In his introduction the Registrar-General, T. H. Lister dwelt at some length on the practicalities of how this information had been collated and justifies the methodology used in tabulating it. One significant conclusion which is noted is the disparity in infant mortality rates when comparing Lancashire with those of the combined district of Herefordshire, Monmouthshire, and Wales. No explanation is offered, but it is suggested that this might be a fruitful area for further investigation.[102] A commentary on the report which was published in the *Journal of the Statistical Society of London* likewise notes the disparities in mortality rates, explaining them firstly in terms of population density, secondly of prosperity, and thirdly of ventilation, thus adhering entirely to environmental explanations. Infant mortality rates are alluded to briefly but are given less prominence than in the original report.[103]

It can be difficult to draw direct comparisons between reports as Farr's focus shifts from year to year and his methods evolve. In 1843, for example, infant mortality figures were broken down by sex and location, but not by age,[104] whereas in 1845 he gave a very detailed breakdown by age as shown below:

[101] Dunn, P. 'Dr. William Farr of Shropshire (1807-1883): obstetric mortality and training,' *Archives of Disease in Childhood Fetal Neonatal Edition 2002:* **86:** F67-F69.
[102] House of Commons, *First Annual Report of the Registrar-General of Birth, Deaths, and Marriages in England.* (London: HMSO, 1839): 16.
[103] Review, 'First Annual Report of the Registrar-General of Birth, Deaths, and Marriages in England, 1837-8,' in *JSSL* **2** (4):269-274.
[104] Great Britain, Registrar General, *Fifth Annual Report*: 60ff.

Table 1: Deaths of boys aged 0-5 years, registered in 1842: [105]

Age in months							Age in years				
>1	>2	>3	>6	>9	>12	Total >1 yr	>2	>3	>4	>5	Total >5 yrs
13,987	5,172	3,653	8,279	6,814	6,141	44,046	14,748	7,580	4,852	3,421	74,647

Table 2: Deaths of girls aged 0-5 years, registered in 1842: [106]

Age in months							Age in years				
>1	>2	>3	>6	>9	>12	Total >1 yr	>2	>3	>4	>5	Total >5 yrs
10,366	3,887	2,890	6,634	5,594	5,287	34,658	13,959	7,504	4,795	3,472	64,388

It is possible to see from this the importance of perinatal mortality in particular, a topic with which Farr concerns himself in a number of his commentaries. It is also clear, although no link is made explicit by Farr, that by far the highest levels of mortality are found among those children who, as Chapter Three will show, were of an age to be specifically excluded from admission to voluntary hospitals.

By this time Farr was searching for possible explanations for such high mortality rates by making comparisons with statistics from overseas, but could find no patterns in either illegitimacy rates, geographical location (having considered countries across Europe) or religious confession. He suggested that foundling hospitals contributed to high levels of infant mortality among illegitimate infants, and that infant mortality was lower where care was better.[107]

[105] Great Britain, Registrar General, *Sixth Annual Report of the Registrar General of Births, Deaths, and Marriages in England.* (London: HMSO, 1845): 66-7.
[106] Great Britain, Registrar General, *Sixth Annual Report of the Registrar General of Births, Deaths, and Marriages in England.* (London: HMSO, 1845): 66-7.
[107] Great Britain, Registrar General, *Sixth Annual Report of the Registrar General of Births, Deaths, and Marriages in England.* (London: HMSO, 1845).

Each report was drawing a clearer picture than the last, as Farr became more confident in his system of classifications such as nosology and breakdown by ages, and started to discard less-promising avenues of investigation such as religious affiliation. As far as infant mortality was concerned, the Seventh Report contained Farr's call to action.

Table 3: Comparison of mortality rates in percentage terms for infants and young children in Manchester, Liverpool, and Surrey in 1845. [108]

	Manchester urban		Manchester rural		Liverpool		Surrey	
	Males	Females	Males	Females	Males	Females	Males	Females
0-1	34,637	27,413	22,094	15,397	30,419	25,609	14,709	10,791
1-2	17,227	16,872	7,451	6,327	17,039	16,810	4,386	3,657
2-3	7,829	7,954	3,004	3,635	9,094	8,237	2,284	2,328
3-4	5,644	6,046	2,042	2,353	6,241	5,432	1,716	1,515
4-5	4,205	4,415	1,723	2,311	4,422	4,183	1,437	1,515
0-5	14,767	13,208	7,431	6,254	14,377	12,771	4,772	4,066
5-10	1,527	1,569	1,020	0,766	1,735	1,590	0,875	0,830

Farr's comment on these figures was that 'the enormous extent of the mortality of [Manchester and Liverpool] is appalling. The excess over the mortality of Surrey shows to what an extent it is unnatural and susceptible of remedy.'[109]

By 1849 the sense of a pioneering enterprise was disappearing from the commentaries in the Registrar General's annual reports. Earlier reports had examined a number of different areas, beginning with the bare statistics and going on to consider issues such as illegitimacy, epidemic disease, health inequalities, and a range of possible explanations for variations in morbidity and mortality. The eighth annual report has an air of consolidation, providing a statistical overview of the years 1837- 45, along with

[108] Great Britain, Registrar General, *Seventh Annual Report of the Registrar General of Births, Deaths, and Marriages in England.* (London: HMSO, 1846): 332ff.
[109] Great Britain, Registrar General, *Seventh Annual Report*: 329.

the latest data (1845 – there was some delay in publishing each year's figures). Farr claimed two chief uses for the information collected under the Registration Act. They

> 'throw light on the causes that affect the health of the people, and will ultimately lead to the diminution of sickness and the extension of life. This is, perhaps, their most important use. Next to it, in interest, is their application to the purposes of Life Insurance....'[110]

The very fact that Farr's tables were being relied upon by successful businessmen is evidence of the faith which was held in their reliability, and the acceptance which was now being conferred upon them in the world beyond a narrow circle of reformers.

2.5 Conclusions

There are several strands among the evidence from this period. There was little doubt in the minds of investigators and reformers that the condition of the labouring classes, and of their children in particular, presented moral and practical difficulties, but the primary question was one of responsibility. Utilitarians such as Chadwick sought to blame the poor themselves for their predicament, and to avoid taking any action which might undermine their sense of a need to provide for themselves and their families. Poverty was, in this sense, a personal moral failing. For Tories such as Kay poverty was also a moral issue, but the responsibility lay with the higher orders in society to provide and set an example for those below them. Provision of schools, housing, and works of charity, far from undermining the poor, were a social obligation towards them. For the radicals, the question was the broader one of the organisation of society – legislation concerning registration, working hours, and educational provision would be just the beginning.

It is possible to see here and there a distinct idea of childhood articulated, the child as an individual with its own rights and interests rather than an adjunct to or property of its

[110] Great Britain, Registrar General, *Eighth Annual Report of the Registrar General of Births, Deaths, and Marriages in England.* (London: HMSO, 1849): 277.

parents. Horner's view on the child's right to protection by the state from injury by a parent, reiterating that asserted by Livesey in 1833, would not receive formal legal recognition until 1908,[111] while his emphasis on taking the child's perspective into account when making decisions concerning it would finally achieve legal status in the Children Act of 1989.[112] The factory investigations discussed play as a distinguishing, rather than desirable, feature of childhood, and produced the first attempts at defining boundAriès between childhood and adulthood in terms of physical norms. As Horner's subsequent investigations into height would prove, this was a more complex matter than was first realised, and opened a new field for the investigation of both growth and developmental norms. In many ways, then, these investigations had given rise to a new understanding of young children as being not merely quantitatively but qualitatively different from older children, let alone adults.

The significance of Farr's tables of mortality was not that young children died in large numbers – this much was well-known – but that they died in much smaller numbers in some places than in others. This suggested that infant mortality, far from being the inevitable feature of early childhood which many had supposed it to be, was in fact an avoidable phenomenon. Farr's attempts to make correlations with external factors were only partially successful, and possible remedies included sanitary reform, the education of parents, and the training of midwives. Farr did not mention the creation of children's hospitals. Ellis acknowledged the therapeutic uselessness of medical intervention for confronting the problem of infant mortality, and so it must be asked how it came to be that in such a short space of time the case for children's hospitals came to be seen as being so compelling. The public health link is one which is rarely made by historians in this context, but the timing is significant and it will be shown that the case made by the hospitals' proponents drew heavily on public health arguments and evidence.

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[111] Stewart, J. 'Children, Parents, and the State: The Children Act, 1908', *Children and Society* **9** (1) 90-99, April 1995.
[112] Ekelaar, J. & Dingwall, R. *The Reform of Child Care Law: a practical guide to the Children Act, 1989.* (London: Routledge, 1990).

The Utilitarians sought information as a basis for rational decision-making. The French clinics and their own statisticians had shown how useful generalisations could be drawn from the large-scale collection of medical data, and indeed similar exercises were being undertaken on a more ad hoc basis in British industrial medicine. The insurers had shown how reliable data collected on a large scale might be put to practical use; in Prussia and Austria medical records were now being collected and could set a further example for Britain. Horner and others demonstrated the potential use for reliable sets of growth and development milestones, if such could be compiled. Donné's systematic investigations into infant feeding were of great relevance to doctors dealing with infant mortality in Britain, who could see the merit of further such studies. Children's hospitals would provide the obvious locations for the systematic, large-scale collection of data relating to children's health at a time when, as Ellis had pointed out, many of the commonest causes of mortality were remediable.

There was also a need for education for parents and nurses. The Health of Towns survey had indicated the scale of the problems which were caused by bad practices, and these needed to be remedied whether from a Tory perspective of reinforcing the family's ability to provide for itself or from a Radical one of providing a state-supported workforce of trained midwives and nurses. Children's hospitals could provide centres in which this education and training could take place, as well as providing an incentive for parents to attend.

The opening of the first British children's hospitals would take place in an intellectual context which had been transformed over the previous two decades. High levels of infant and child mortality were no longer regarded as natural or inevitable. Disease was now seen as being quantifiable and, importantly, predictable. Statistical analysis of the wide variations in mortality could therefore make clear links between the health of children, the conditions in which they lived, and the care which they received. There was a recognition that children were themselves qualitatively different from adults in physiological terms, and it had been acknowledged in the factory inquiries that children

under the age of nine years were at a particularly sensitive and vulnerable stage of physical development. Finally, the Health of Towns Commission had shown the need for the education of parents, nurses, and midwives in the care of young children; this would require some kind of institutional framework if it were to be undertaken on the scale on which it were needed. Here were some of the ways in which the intellectual ground was being prepared for the new hospitals.

3. Intellectual changes affecting medical theory and practice

3.1 Introduction

During the 1830s and 1840s there was considerable debate both in the medical press and, to some extent, more widely among the literate classes, concerning the feasibility and even the desirability of providing medical treatment for young children. It will be shown that there was a growing scepticism about established methods and ideas relating to the practice of medicine, but there was also considerable resistance to many of the new ideas and techniques which were being described at this time. Evidence will be cited that these innovations were informed in part by the rapid development of statistical techniques as applied to the investigation of social conditions, as well as by the discoveries being made in laboratory medicine, particularly in the German-speaking world. In combination, they offered the possibility of creating diagnostic tools which drew on objective evidence which could be gathered by observation or measurement alone and, in as much as they enabled physicians to reduce their previous reliance on patient testimony as a basis for diagnosis, made possible the application of medicine to the treatment of young children. The growing body of objective evidence was giving rise to a view that children were qualitatively different from adults, and so merited a distinct approach to health care. On the other hand, the more systematic and evidence-based approach to diagnosis had led to no great therapeutic insights, and the question remained as to just what could be done to make a material improvement to the health of young children.

The purpose of this chapter is therefore to show how changes in the understanding and practice of medicine began to make a medicine of childhood possible. It will approach this theme in a number of different ways. Firstly, it will outline the growing problems with traditional approaches to practising medicine, and the confusion which resulted. It will also show how British medical understanding was increasingly influenced by statistical methods; how it began to be infiltrated by Continental clinical practice; and how these influences would help to create the possibility of physical diagnosis

independent of patient testimony, an important factor in the development of child medicine. It will be seen that, while this is a topic which has been addressed in the secondary literature, some accounts fail to convey the strength of the debate which was taking place in the medical press of the period, from which much of this chapter is drawn, and in particular they fail to examine the place of children in these debates. The debate remained confused and still not settled even by mid-century, and the therapeutic value of the new ideas was far more hotly contested than some secondary accounts might suggest. What was clear by this time, however, was that young children were medically distinct from older children and adults and were thus susceptible of separate approaches to care and treatment.

3.2 Source Material – the medical literature

The chapter draws significantly on a range of publications which were aimed at and largely written by medical professionals of the mid-nineteenth century. Bynum and Wilson identified five categories of medical periodical, with the proviso that boundaries were fluid and that many publications could be fitted into more than one category.[1] The first category was those periodicals which were aimed at the whole of the medical profession, while the second was the specialist ones aimed at some group within the profession, groups such as general practitioners, pharmacists, or dentists. These specialist periodicals came more to the fore at a time after that with which this study is concerned. The third category was that of scientific journals which contained a large amount of non-clinical material such as microscopy, anatomy, physiology, or bacteriology, while the smallest category aimed to communicate with the general public but from the viewpoint of orthodox medicine; this included some temperance and anti-tobacco journals. Finally, the fifth category dealt with unorthodox medical philosophies and theories such as hydropathy, phrenology, and homoeopathy. The period on which

[1] Bynum, W. F., and Wilson, J.C. "Periodical knowledge: medical journals and their editors in nineteenth century Britain." *Medical Journals and Medical Knowledge: Historical Essays* (1992): 29-48.

this study concentrates, the 1840s and 1850s, was a time of consolidation when the previous rise in the number of titles being published levelled off before experiencing a slight decline in the 1860s, then rising dramatically thereafter. Bynum and Wilson are not clear as to the reason for this change in the trend, but indicate a possible link to the professional reorganisation which preceded and surrounded the passing of the 1858 Medical Act.[2]

The journals chosen for this study fall largely into the first of Bynum and Wilson's categories, although they are not as clearly differentiated would be the case later in the century and they contain strong elements of content which would subsequently be found more suited to periodicals of the second and third types. Although possessing some 15% of the country's doctors, London was responsible for publishing 75% of the medical press titles.[3] The journals were therefore chosen in part for geographical range, representing not just metropolitan opinion but the professional life of the significant provincial centres of Glasgow, Edinburgh, and Dublin. Titles chosen for this purpose include the *Glasgow Medical Journal,* the *Edinburgh Medical and Surgical Journal*, the *Dublin Journal of Medical Science,* the *Dublin Quarterly Medical Review*, and the *Dublin Quarterly Journal of Medical Science.* While relevant specialist publications were lacking in Britain, the move towards specialisation began in Austria with the publication of the *Journal für Kinderkrankheiten,* cited in this study*,* with which there is no British contemporary to compare. The case for children's hospitals was often made during the 1840s by comparison with Continental practice, and during this period the *British and Foreign Medico-Chirurgical Review* played a significant role in bringing the latest overseas developments and innovations to the attention of the British medical profession. Reviews of textbooks about children's medicine and reports from children's hospitals were seized upon by campaigners. Many of the periodicals which set out to inform their readers of news and current practice were published on a quarterly basis, but since the 1820s there had been an increasing number of weekly

[2] Bynum and Wilson, 'Periodical Knowledge': 29-48.
[3] Bynum and Wilson, 'Periodical Knowledge': 34.

publications, chief among which was the *Lancet*, a campaigning journal which set out both to inform and to reform. Its editorial comments give some insight into at least one strand of medical opinion concerning the innovations which were taking place during this period, although it is open to question how representative of the profession as a whole any of the medical press could be said to be, given the small proportion of doctors who were actually writing for it. Finally, some other periodicals have been included as a result of referrals from reference lists and bibliographies: these include the *Medical Times and Gazette,* the *Medico-Chirurgical Review*, and the *Monthly Journal of Medicine*. These feature less prominently and appear to have served the purpose more of medical society newsletter than learned journal or campaigning platform. All the periodicals are thoroughly and generally accurately indexed, and sampling was undertaken by means of key word search, terms used including *baby, child, croup, hospital, infant, measles, rickets,* and *scrofula*, as well as the names of key persons, such as West, Merei, Whitehead, and Borchardt, and the various named institutions for sick children.

The changing nature of the clinical reports and other discussions which are published over the twenty year period reviewed in this chapter reflect a conceptual shift which has been described in different ways by Jewson and Pickstone. Jewson's discussion of medical cosmology considers the shift in the location of the production of medical knowledge from bedside to clinic to laboratory in the period 1770-1880 and, in the process, the change in nature of that knowledge.[4] This is evident in the appearance of reports of chemical analyses of bodily fluids, these reports still appearing, however, in general medical journals rather than in the more specialist publications where such matter would subsequently be located. Pickstone describes different ways in which philosophers, or scientists, or men of knowledge attempted to understand the world. He suggests that in earlier times this can be described as Natural History, whereby they described what they saw. This was followed by attempts at classification, what

[4] Jewson, N.D 'The Disappearance of the Sick-Man from Medical Cosmology, 1770-1870.' *Sociology* **10** (2) (May,1976): 225-244.

was seen in Chapter Two in Farr's attempts at creating a standardised nosology, for example, and then moving on to active experimentation.[5] This is particularly evident in the change in the way in which post-mortem examinations are discussed; initial examples are purely descriptive, but it will be seen that subsequently, for example, the question of the significance of lesions assumes great importance. In these ways a study of the literature illustrates the flows and developments in the arguments which led to the creation of children's hospitals.

3.3 Problems with Traditional Medical Practices

Standard historical accounts show that medical practice in much of the Western world was by the early nineteenth century an incoherent jumble, drawing on ancient theory, more recent discoveries, and the experiences of individual practitioners. One difficulty facing the profession was that the inadequacies of longstanding theoretical models of medicine had become apparent, and there was undoubtedly an awareness of the gap they left. The result was that every practitioner adhered to his own pet theory, and it could be difficult to evaluate the competing claims which were made. The physician William Cullen wrote in 1827 that:

> 'Every one nowadays pretends to neglect theory, and to stick to observation. But the first is in talk only, for every man has his theory, good or bad, which he occasionally employs; and the only difference is, that weak men who have little extent of ability for, or have little experience in reasoning, are most liable to be attached to frivolous theories.'[6]

Advances in knowledge had reached the point where practitioners were reluctant to discuss their work in terms of the older theories of medicine, and yet survivals of older frameworks continued to inform their practice. In the early nineteenth century medical practice continued to be influenced by the humoral model, which stressed the

[5] Pickstone, J.V. *Ways of Knowing*. (Manchester: Manchester University Press, 2000).
[6] Cited in Bynum, W.F. *Science and the Practice of Medicine in the Nineteenth Century.* (Cambridge: Cambridge University Press, 1994): 1.

individuality of each patient.[7] The patient's health and character were thought to be shaped in part by temperament, which was in turn shaped by a predominance of one of the four humours; it was believed that these in turn were influenced the environment, particularly climate and diet, so that people from northern climates tended to be paler, cooler, and slower in temperament, whereas those from equatorial regions were, for example, more temperamentally labile. It followed from this approach that disease in any individual person arose from a unique combination of factors including age, temperament, lifestyle, and geographical location. Whilst there is little overt discussion of humoral theory to be found in the medical literature of the mid-nineteenth century, its underlying assumptions remained the stuff of everyday medical practice: even as faith in the strict tenets of humoral theory faded, its methods remained. Bleeding, blistering, and purging in order to restore the proper humoral balance were frequently resorted to, albeit the subject of heated debate by the 1840s, as will be shown in section 3.5. Above all, though, there was the question of the role of the patient's own testimony. In order to form an accurate view of the patient's specific circumstances and temperament a detailed oral history would be taken. This presented obvious difficulties when it came to diagnosing younger children, whose understanding and vocabulary would be comparatively limited, and many physicians were reluctant to attempt it.[8] Humoral theory had long been challenged by organ theory and 'solidism', models which gained intellectual credibility during the first half of the nineteenth century as a result of work done first in Paris, in the first quarter of the century, and subsequently in Vienna under Rokitansky and his colleagues.[9] Its very survival illustrates the conservatism of mainstream medical practice.

By the end of the eighteenth century there were growing pressures for reform of what amounted in practice to a free market in medicine. Much of this pressure came from the more established parts of the medical profession as it sought to protect itself both

[7] Porter, R. & Porter, D. *In Sickness and In Health.* (London: Fourth Estate, 1988): 144.
[8] Porter, D. & Porter, R. (1989) *Patient's Progress: Doctors and Doctoring in Eighteenth-Century England.* (Stanford, Ca.: Stanford University Press, 1989): 183-4.
[9] Quinonez, G. 'The Origin of Basic Science Pathology: An Unrecognized Event in the Medical History Literature', in *Canadian Journal of Pathology*, **2**:3, Fall 2010: 13-18.

from the competition of quacks and empirics and also from the harm which it was feared could be done to the profession's reputation by incompetent fringe practitioners.[10] The first legislative outcome of this campaign was the ApothecAriès Act of 1815, which set standards for what would develop into general practice. There would follow a long campaign for further reform, culminating in the Medical Registration Act of 1858. The implications of these campaigns were considerable, resting as they did on claims by the apothecAriès, physicians, and surgeons to specific expertise and efficacy. Practitioners were under growing pressure to justify these claims by producing visible improvements in patient outcomes.[11]

As the confusion described above suggests, many medical men were experimenting with their own approaches, and even sharing their results through publication, but one obstacle to the adoption of knowledge and techniques gained through practical investigation was the nature of elite medical education. University medicine in early nineteenth-century England was almost entirely theoretical and lacking a practical dimension.[12] Anatomy, for example, was normally taught from textbooks and without reference to dissection. This fitted with the notion of the physician as an educated man who worked through observation and reasoning; it was surgeons and others who got their hands dirty. This absence of practical application explains the enormous demand for the private anatomy classes which flourished after the passing of the ApothecAriès' Act in 1815, and also the growth in attendance by English physicians at Scottish universities, especially Edinburgh and St. Andrews. The elite model practised by the English universities and the Royal Colleges was seen increasingly to be out of touch with the innovations and demands of modern medical practice. By the nineteenth century new challenges such as the cholera which first appeared in Britain in 1831, and in the face of which physicians appeared impotent, were leading the public to question

[10] Porter, R. *Quacks*. (Stroud: Tempus, 2001).
[11] Huerkamp, C. *Der Aufstieg der Ärzte im 19. Jahrhundert: vom gelehrten Stand zum professionellen Experten; das Beispiel Preußens.* (Göttingen: Vanderhoek & Ruprecht, 1985): 22-7.
[12] Poynter, F.N.L. 'Medical Education in England Since 1600', in O'Malley, C.D. *The History of Medical Education.* Cal., (USA: University of California Press, 1970): 235-249.

the competence of medical practitioners. The result was that such teaching as took place within hospitals was directly related to the shortcomings of the university medical curriculum.[13] A crisis of confidence arose both within the profession and among the wider public following the failure to cope with the arrival of cholera in Europe, and there was a growing feeling, particularly among younger physicians, that medicine had reached a cul-de-sac. Public anger at the failings of the medical professions found vigorous expression in the Liverpool cholera riots of 1832.[14]

The medical press demonstrates the unsettled intellectual climate of the period and shows that many among the lay population were turning away altogether from what then constituted orthodox medicine. The brutality of blistering, purging, and bleeding might have been acceptable as long as they seemed to serve some therapeutic purpose, but if such medical interventions were to have no clinical benefits then many patients preferred a kinder approach, and this is reflected in the variety of attempts which were made at finding fresh approaches to addressing medical problems. One approach was homoeopathy, which gained rapidly in acceptance from around 1830,[15] and which owed its popularity specifically to the public's loss of confidence in mainstream medicine. Homoeopathy was strongly opposed by the medical establishment as a threat to both their professional standing and their incomes. In his descriptions of European children's hospitals, Hügel felt the need to state in almost every case that their method of treatment was allopathic, which is to say not homoeopathic; it is significant of the lack of consensus concerning therapeutic approaches that he felt he had to make this point at all. One interesting exception was the Ospedale di Santa Filomena, founded in 1834 by the Marchesi Falletti di Barolo, in Turin. Whilst Hügel stressed its use of allopathic methods, he also explained that there was a department which had been established to experiment with the application of homoeopathic principles to the treatment of disease. This had been established at the

[13] Huerkamp, *Der Aufstieg der Ärzte im 19. Jahrhundert.*
[14] Gill, G., Burrell, S., and Brown. J. 'Fear and Frustration: the Liverpool cholera riots of 1832', in *Lancet* **v358**, issue 9277, 21 July 2001: 233-7.
[15] Huerkamp, *Der Aufstieg der Ärzte im 19. Jahrhundert:* 89.

express wish of Barolo.[16] This case illustrates the way in which lay patronage could prove stronger than mainstream medical opinion. Most children's hospitals described by Hügel had, on the other hand, been founded by medical men, whose allopathic values and priorities they reflected.

The debate about therapeutic approaches was carried on in the pages of the medical press. An account in the *Lancet*, dating from 1853, describes the death of a 19-month-old child from teething (a common, if erroneous, diagnosis at this time). He had been treated for two weeks with cold baths and homoeopathy; eventually two doctors were called, who prescribed a warm bath, but too late. There was no proof that homoeopathy had killed him, but the coroner condemned reliance on homoeopaths.[17] The medical press of the period shows a consistent lack of agreement, and to some extent lack of confidence, as to how best to proceed across a wide range of medical conditions. There was a demand, then, from patients and lay patrons, even if not from the profession itself, for a new approach to the practice of medicine, one which was based on evidence, rather than speculation or custom, which would be systematic, and above all which would be more likely to cure than to kill its patients.

At the same time that the public were turning away from orthodox medicine and towards homoeopathy, attempts were being made to establish some kind of programme of action specifically aimed at promoting the health of young children. The systematic study of the physiology of children was beginning to separate them from adults. These studies had already been proceeding as an aspect of factory medicine, so for example in 1833 Gaskell described in some detail the process by which foetal bones came to maturity, and the crucial period in early childhood when bones remained

[16] Hügel, F.S. *Beschreibung sämmtlicher Kinderheilanstalten in Europa: nebst einer Anleitung zur zweckmässigen Organisation von Kinder-Krankeninstituten und Kinderspitälern, mit Beiträgern zur Geschichte und Reform sämmtlicher Spitäler im Allgemeinen.* (Vienna: Kaulfuss Witwe, Prandel & Comp., 1848): 216.
[17] *Lancet*, 29th January, 1853: 100.

soft and malleable, and hence vulnerable to deformation.[18] Gaskell's description is superficial and his account of rickets vague, but he was attempting to use evidence systematically to indicate some distinctive physical characteristics of the young child. An important further step was the identification and study of cells, during the 1830s and 1840s, which demonstrated that cellular activity in children was particularly vigorous. This was the point at which authors such as Combe were examining more closely the concept of maturation.[19] Physicians at this time were showing more awareness of the different ways in which diseases could present themselves in children as compared with adults. J.F. Duncan, for example, looked more systematically than was commonly the case at reports of post-mortem examinations,[20] whilst Charles West brought together reports of a series of cases of pneumonia, with a view to showing their common features in contrast to the more established method of considering them in the light of the unique qualities of each patient.[21]

More effort was now being made to understand what was required to treat children successfully. One reviewer, writing in 1843, stated that

> 'It is a common, although we think a very erroneous, opinion, that the treatment of the diseases of infants and children is, on the whole, more difficult and unsatisfactory than that of the diseases of adults. It is objected that, as young creatures cannot give us any distinct information with respect to the seat and nature of their sufferings, we are necessarily left in considerable doubt.'[22]

The author demonstrated his stance midway between the older and newer approaches by going on to explain that the diseases of children are simpler than those of adults and uncomplicated by emotions, a view based more on assertion than evidence.

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[18]Gaskell, P. *The Manufacturing Population of England, its Moral, Social, and Physical Conditions, and the Changes which have arisen from the use of Steam Machinery; with an Examination of Infant Labour.* (London: Baldwin and Cradock, 1833).
[19] Steedman, C. *Strange Dislocations: Childhood and the Idea of Human Interiority, 1780-1930.* (London: Virago, 1995): 71-2.
[20] Duncan, J.F. 'Illustrations of Infantile Pathology', in *Dublin Journal of Medical Science,* XXII, 1843: 27.
[21] West, C. 'Clinical and Pathological Report of the Pneumonia of Children as it prevails among the Poor in London', in *Dublin Journal of Medical Science*, XXIII, 1843: 340-62.
[22] Review in *Medico-Chirurgical Review*, 39, 1843: 75-6.

Charles West contested this last point vigorously, objecting to any treatment which might alienate a child from its carers, and stating that 'nothing is of greater moment than that a sick child should retain its fondness for its attendants during the whole period of its illness',[23] and his advice concerning the medical and nursing management of children in hospital reiterated the importance of the emotional dimension in assisting recovery. This anticipated what would become one of the distinguishing characteristics of the care given in paediatric hospitals. As his record of publications makes clear, West's opinion was based on extensive experience and specialisation, rather than reflecting, as many medical correspondents did, on a few interesting cases he had encountered.

The debate over therapeutic bleeding shows the confused state into which medical practice had fallen by the end of the first half of the nineteenth century, and out of the general debate about therapeutic approaches there emerged a realisation that methods which might work for adults might not do so for children, and might indeed cause them harm. Humoral therapy, from which much early-nineteenth century medicine was derived, was a holistic approach, working on the principle of achieving balance within the patient as a whole. The examination of particular systems and organs suggested, on the other hand, that disease might be seated in specific locations – the 'lesions' identified by Bichat and others in Paris, for example.[24] An examination of attitudes towards the use of therapeutic bleeding shows some confusion among mid-nineteenth century practitioners. Advances in anatomical knowledge during the eighteenth century had revealed, among other things, the structure of the nervous system. Its function was investigated by Galvani and others, and by the later part of the century there was a vigorous debate taking place between advocates of the nervous system and those of the blood as the seat of the human life force.[25] Discoveries about specific structures such as the nervous system implied that diseases

[23] West, C. 'Clinical and Pathological Report of the Pneumonia of Children'.
[24] Foucault, M. *The Birth of the Clinic: an archaeology of medical perception.* (London, Routledge Classics, 2003, new ed.).
[25] Bynum, *Science and the Practice of Medicine in the Nineteenth Century.* p. 14.

might have identifiable seats within the body, and thus be susceptible to specific and standardised therapies, rather than unique treatment regimens tailored to the individual constitution. In practice, however, accounts in the medical press show that many physicians combined elements of the old and the new thinking in a somewhat haphazard way, as can be seen in accounts of the use of therapeutic bleeding.

Harvey's identification of the circulation of the blood could be taken as evidence to support the systemic effects of therapeutic bleeding and so, from one perspective, to support the Galenic approach of balancing the humours,[26] and yet there was a considerable amount written in the 1840s and 1850s about bleeding as a localised therapy. This was not entirely new. Writing in 1820, Vandeburgh had argued in favour of the therapeutic bleeding of children, but recommended that it be done with leeches rather than by venesection, this approach being both kinder and more moderate, as well as easier to localise, in line with the latest thinking. He went into considerable technical detail as to how this should be done, and cautioned against excessive bleeding. In particular he warned against bleeding for 'trivial' complaints such as stomach aches and sore eyes.[27] He recognised that excessive bleeding could weaken the patient, a point which would subsequently be debated in terms of whether it was preferable to take repeated small quantities, or whether it might be both safer and more effective to take one large amount. Vandeburgh also argued in favour of the traditional Galenic therapies of blistering and purging, and he adhered to a belief in applying systemic treatments for local problems such as cradle cap. Four years later, Forsyth was making a stronger case for localised bleeding, for example behind the ears to assist with teething and to the chest for whooping cough.[28] This approach was intellectually incoherent, being against both the spirit of humoralism and the teaching of Harvey.

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[26] Wear, A. 'Early Modern Europe, 1500-1700', in Conrad, L.I., Neve, M., Nutton, V., Porter, R., and Wear, A. *The Western Medical Tradition.* Cambridge: Cambridge University Press, 1995): 279.
[27] Vandeburgh, C.F. *The Mother's Medical Guardian.* (London: Edwards and Knibb, 1820): 43-5.
[28] Forsyth, J.S. *The Mother's Medical Pocket-Book.* (London: D. Cox, 1824): 70, 79-80.

Localised bleeding appears to have gained favour during this period in cases of convulsions, the preferred method being the application of leeches to the temples. One six-year-old boy received two rounds of leeches, purging of the bowels, and blistering, all for the treatment of his convulsions. When his condition deteriorated he was treated with more leeches, more purgatives, and ether. His continuing deterioration was ascribed to the severity of his illness, and it was made clear that debility was no argument against blood-letting.[29]

The argument over localised as opposed to systemic bleeding was developed in a French article of 1842 which defended the practice of general bleeding against what was described as the 'general opinion' in favour of localised bleeding.[30] The discussion concerned 'encephalic congestion', for which localised bleeding, using leeches, was considered to be particularly appropriate. The author noted, however, the difficulty of reaching an accurate diagnosis in cases of cranial disease, and objected that this could have many causes, not all of which were susceptible to treatment by leeches. He was thus somewhat ambiguous as to whether his real objection was to the principle of localised bleeding or simply to its use where the diagnosis was uncertain. This ambiguity is characteristic of the time.[31]

The argument here was about practicalities, rather than principles, and this approach seems to have been typical of French practice at this time: a report from 1843 describes the treatment of a 14-year-old boy suffering from 'myelitis, with softening of the spinal cord'.[32] The boy received fifteen leeches, repeated purgatives, and blistering. He died, but this raised no particular comment. The following year a Dr. Scott Alison noted that blood-letting could sometimes be successful in treating pneumonia in children.[33] Some authorities were sounding a note of caution, though. An anonymous reviewer, writing in 1844, noted that general bleeding was of use only in

[29] Report in the *Lancet*, 12th June, 1841: 408-10.
[30] Review in *Medico-Chirurgical Review,* v37, 1842: 106-9.
[31] Review in *Medico-Chirurgical Review,* v37, 1842: 106-9.
[32] Report in the *Lancet,* 29th July, 1843: 627-8.
[33] Note in the *Lancet*, 21st November, 1844: 178.

a limited number of specifically adult cases, and that local bleeding was to be recommended for relieving localised symptoms.[34] All of these recommendations were assertions rooted in the beliefs and experience of individual practitioners, with no attempt to review the evidence systematically.

In his collected lectures, based on his experience of treating children at the Waterloo Infirmary in the 1840s, Charles West advised that bleeding be tailored to the severity of the condition, but offered no more specific advice.[35] (He would subsequently sound a note of greater caution, noting that therapies including bleeding which might be used with success on an adult could hasten the death of a child.[36]) In 1850, however, an American physician commented on the decline in the use of bleeding both in America and in Ireland. He thought it had been discredited by over-use, but that it could still serve a useful purpose. His call for a more precise guide to quantities that should be taken hints at the more systematic approach which was appearing in a number of areas of medical practice, underpinned by the emerging sense that some aspects of medicine were after all susceptible to generalisation. There followed a debate in the *Lancet* about the efficacy of bleeding children, which was begun by a Dublin doctor who claimed that children 'bear blood-letting badly, and often fatally'.[37] He compared this with the unfavourable effects of emetics, opium, mercury, and blistering, all of which were commonly used on adults and all of which had proved ineffective with or harmful towards children. Shortly afterwards a Dr. Davies responded, claiming that children bore blood-letting very well, and that the mistake was to take small amounts repeatedly, a practice which debilitated the child while not affecting the disease. He cited a range of publications in support of his claims, but actual evidence was limited to two successful cases.[38] Here is an indication that a clear distinction was being made

[34] Review in *Dublin Journal of Medical Science*, XXIV, 1844: 266.
[35] Review in the *Dublin Quarterly Journal of Medical Science*, VII, 1849: 444.
[36] Cited in review in *Edinburgh Medical and Surgical Journal*, v82, 1855: 113.
[37] Williams, E. 'A Few Remarks on the Diseases of Children', in the *Lancet*, 29th November, 1851: 505-6.
[38] Davies, H. 'On bloodletting in children', in the *Lancet*, 27th December, 1851: 602.

between the treatment of children and that of adults, even while there was a dispute as to the precise approach which should be taken.

This practice was one of many which were facing increased scrutiny at this time. In February, 1854, W. Hughes Willshire alleged that blood-letting might be 'an occasional cause of cerebro-rachidian mischief', sparking another debate about the merits of the practice.[39] A note from the *Dublin Medical Press*, reprinted in the *Lancet* in August of that year, reflected the growing view that blood-letting not be advised for 'feeble or unsound' patients, and this category was taken to include city-dwellers. It asked, though, whether physicians might not be erring too far on the side of caution, and it defended the practice in terms of reducing the overall quantity of blood in circulation, rather than the localised relief of symptoms.[40]

Although reports of bleeding continued after this time, the tone became still more defensive. Later in the same year a Dr. John Langley wrote that

> '...the sarcasm and professional persecution I experience on account of my honest and unflinching avowal of my practice, little inferior to the persecution of the great man who discovered the circulating course of the important fluid...cannot be better elucidated by the following....'[41]

Langley went on to describe a conversation between one of his patients and a surgeon who professes to be surprised at Langley's methods, saying that 'bleeding is now quite out of fashion'.[42] The realisation of the lack of clarity which the profession maintained about its methods and rationale is evident in an article published in Glasgow, also in 1854. The physician Eben Watson noted the mixture of 'confused statement of fact' and 'plausible but insufficient theory' which underlay the treatment of children with lobar pneumonia, and yet went on to advocate the use of leeches to 'detract blood from the

[39] Report in the *British Medical Journal*, 17th February, 1854: 151-2.
[40] Note in the *Lancet*, 5th August, 1854: 126.
[41] Letter to the *Lancet*, 4th November, 1854: 371-5.
[42] Letter to the *Lancet*, 4th November, 1854: 371-5.

affected part', thus ignoring, as was customary, the possibility of replenishment from the general circulation.[43]

A significant change in attitudes towards blood-letting can, then, be detected over the period from around 1840-1855. This change arose as a result not of new theoretical insights, but, as has been shown, from the experience of individual practitioners who were incorporating specific practices based on new ideas about localised pathology without accepting the principles which underlay it. The result was a still more incoherent mixture of old and new approaches. Blood-letting techniques had often been used in conjunction with those other survivors from the humoral era, purging and blistering, but the justifications offered were almost exclusively empirical. There was little talk of restoring internal balance, although some practitioners continued to defend systemic bleeding. It was increasingly being used for the relief of specific symptoms, contrary to what must surely have been evident to all who were familiar with Harvey's work. Experience which had been acquired on adults was now being questioned when applied to children. As the dispute between Williams and Davies in 1851 had shown, there was a growing awareness that children respond differently to a range of therapies including blood-letting, and that at the very least the technique ought to be modified to take this into account.

Another area in which the distinctive nature of child patients was becoming apparent was that of the post-mortem examination. While there are numerous reports of post-mortem examinations to be found in the medical literature over many decades, until the mid-1840s these were largely descriptive, with little attempt at drawing any conclusions. This reflected the Paris tradition of description and classification, rather than analysis.[44] A report from 1845 illustrates the emerging tendency to form working generalisations from what was observed. It established some visible differences between infantile consumption and adult phthisis, notably that children's lungs showed larger affected areas, and it established that the change in presentation came at

[43] Watson, E. 'On the lobar pneumonia of children', in *Glasgow Medical Journal*, I, 1854: 286.
[44] Foucault, *The Birth of the Clinic.*

around ten years of age. It also noted the lack of haemoptysis in children under the age of nine. Here was evidence that disease processes in younger children might differ significantly from those in older children and adults.[45] The author, Green, was able to draw these conclusions because, unlike previous correspondents who tended to write about the outcomes of at most a handful of examinations, he had examined one hundred and eighty children, giving him a statistically significant sample to analyse.

It was hoped that the knowledge gained by such systematic study would lead to the possibility of physicians being able to diagnose and even treat such diseases. One way of interpreting the views and accounts which have been discussed here would be to say that more profound methodological questions were now being asked about the precision of the measurements being used and the quality of the evidence upon which a range of medical practices were being based. What is striking about this period is that despite the advances in knowledge and changes in therapeutic approaches which were becoming evident and which were contrary to accepted theory and practice, many physicians remained faithful to the old paradigm even while accepting modifications to their practice which ran contrary to it. Kuhn has described the 'paradigm shift' which occurs when the weight of contradictory evidence makes an existing theoretical framework unsustainable,[46] and this is what the medical profession appears to have been moving towards in the later 1840s and early 1850s. The contradictions were indeed accumulating, but the correspondence columns of the medical press show that there remained a marked reluctance among many physicians to accept that the new evidence had any wider implications.

Despite the lack of satisfaction with the state of medical knowledge and practice which was being expressed in the medical press, there was a failure to achieve any sort of consensus about the acceptability of new ideas and approaches which were being circulated. By the 1840s a range of new techniques had become available to

[45] Green, P.H. 'Tabular View of 180 Cases of Tubercle of the Lungs in Children with some remarks on Infantile Consumption', in *Dublin Journal of Medical Science*, XXXVI: 148-9.
[46] Fuller, S. (2003) *Kuhn vs. Popper: the Struggle for the Soul of Science.* (Cambridge: Icon Books, 2003): 19-23.

physicians, including the beginnings of the objective observation of pulse and temperature, the developing practice of stethoscopy, auscultation, and percussion, and the classification of diseases by lesion. There were attempts to assess and compare therapies in a more systematic fashion, taking the first steps towards what would later become the clinical trial, and these attempts were informed by the new knowledge which was emerging from laboratories in the form of microscopy and chemical analysis. The problem remained that clinical outcomes were largely unchanged. One advantage for more traditional practitioners, who continued to propose the individuality of every patient and thus the unique, personal nature of every instance of ill-health, was that their approach enabled physicians to insist on the complex, multifactorial nature of every case and so to explain their therapeutic failures by pleading unforeseen or unknown factors. It was, furthermore, common for patients, and even more so for their relatives, to consult a range of physicians and empirics in the hope of leaving no avenue unexplored. In the event of the patient dying, families wanted to be able to feel that they had done everything they could for them, but this confused the issue of just which physician's efforts had contributed to the clinical outcome. This was not necessarily seen by practitioners as a disadvantage.[47]

3.4 From Anecdote to Evidence

It has been shown that the nature of the advice offered in childcare manuals which were directed at the lay reader, and indeed the evidence on which it rested, changed greatly in the first decades of the nineteenth century, reflecting in part the influence of demographic innovations and the emerging public health movement. Further examination of these manuals can also demonstrate the way in which medical understanding was spreading into the wider consciousness. At the same time the medical press was showing how individualised, empirical case-notes were becoming

[47] Huerkamp, C. *Der Aufstieg der Ärzte im 19. Jahrhundert: vom gelehrten Stand zum professionellen Experten; das Beispiel Preußens.* (Göttingen: Vanderhoek & Ruprecht, 1985): 22-27.

increasingly unacceptable, and that there was a trend towards large-scale and more systematic studies. The debate was, however, far from being resolved by mid-century.

In the earlier part of the nineteenth century there was a steady stream of childcare manuals published, and these were mostly directed at both the educated lay reader and the physician. Although some texts did deal with specific clinical conditions in childhood and infancy, the care and general health of children were not treated as a matter for specialist attention. Hitherto this had been largely a domestic matter: the assertion that medical care would be administered largely by parents is supported by the works of authors such as Buchan (1803),[48] Vandeburgh (1820),[49] and Forsyth (1824).[50] The growth of interest in statistics and their application to the public health movement rapidly influenced the authors of child-rearing manuals, and childcare came to be an area in which medical professionals could legitimately become involved. Combe (1840), for example, showed a much greater awareness than his predecessors of the importance of the wider environment for the health of the child and linked his work directly to the newly-available demographic statistics. Consequently, in keeping with (and indeed at the vanguard of) the new Public Health movement, he had written a manual which is much closer to a modern-day child development handbook.[51]

Authors such as Vandeburgh[52] and Forsyth[53] justified their recommendations by use of anecdote rather than any more systematic evidence. They placed themselves firmly in a tradition of such texts, even while taking issue with aspects of their predecessors' advice. Vandeburgh had, for example, strong views regarding hygiene: he believed in the value of washing for both the child and attendant but warned that giving showers to children under the age of six years ran the risk of inducing convulsions; attendants should never swallow their own saliva or spittle (no reason is given for this) and nor

[48] Buchan, W. *Advice to Mothers on the subject of their own health; and on the means of promoting the health, strength, and beauty of their offspring.* (London: Cadell and Davies, 1803).
[49] Vandeburgh, *The Mother's Medical Guardian.*
[50] Forsyth, *The Mother's Medical Pocket-Book.*
[51] Combe, A. *A Treatise on the Physiological and Moral Management of Infancy.* (Edinburgh: Maclachlan, Stewart, & Co., 1840).
[52] Vandeburgh, *The Mother's Medical Guardian.*
[53] Forsyth, *The Mother's Medical Pocket-Book.*

should they put the spoon into their own mouth before feeding the child. Some of this advice would be regarded as sound today, but Vandeburgh drew explicitly on experience rather than any systematic knowledge or theoretical model. He did discuss a number of therapeutic interventions, including blistering, bleeding, and the use of calomel for purging, and his advice was directed specifically at mothers with a view to moderating their use of these techniques. There was an assumption that with children of this age it was the mothers, rather than medical practitioners, who would be their primary sources of medical treatment. Forsyth likewise advised mothers on the use of leeches and blistering, and also cautioned about the risk of rectal prolapse as a result of excessive purging.

Dewees displayed a compendious knowledge of midwifery which would have been of use to mothers, midwives, and physicians alike, but based his authority on personal experience, taking up half his book with anecdotes. In discussing the likelihood of a child inheriting its healthy (or otherwise) constitution from its parents, Dewees asserts that

> 'we have many times seen children of robust appearance from parents of feeble health; but we do not recollect a single instance, where such children attained an age much beyond manhood….'[54]

Within a decade individual investigators would be gaining the support of parliamentary legislation in gathering statistics which would begin to test such assertions on the basis of systematically-gathered evidence rather than hearsay and recall. Dewees, on the other hand, justified his claims by reference to the Bible, to classical figures such as Galen and Hippocrates, the Italian Renaissance poet Tansillo, and to anecdotes featuring such historical figures as the surgeon William Hunter. (He repeated an anecdote of Hunter's about a woman who gave birth to a mixed-race child and explained that she had been 'frightened by a Negro' when out in her carriage, but

[54] Dewees, W.P. *Treatise on the Physical and Medical Treatment of Children.* (London: John Miller, 1826): 13.

offered no comment as to whether he believed this tale).[55] He also related stories from his own experience, as when warning of the tendency for some nurses to use drugs to induce sleep in their charges: 'We have known a number of cases, where laudanum was used for this purpose….'[56] Dewees asserted strongly that newborn babies should be bathed in warm water, contrasting his view with that of Rousseau, who favoured the sea or a river, but again his argument was personal and anecdotal.[57]

Unlike Vandeburgh and Forsyth, Dewees offered no view as to any ways in which the medical treatment of infants and children should differ significantly from that of adults. Debates or disagreements between authors did take place, but again were couched in terms of the author's experience rather than any more systematic evidence: Eberle, for example, took issue with Dewees about the siting of a stove in the nursery, but had nothing to say about Dewees' views on more substantive issues such as feeding and therapeutics.[58]

By the end of the 1830s the impact of social investigation was becoming clear. Among a long series of childcare manuals, Combe's work of 1840 stands out for devoting an entire chapter to the newly-available health statistics which were being published on behalf of the Registrar-General. It was aimed at the educated general reader rather than purely at medical practitioners, and drew the clear conclusion that much infant and child mortality was not inevitable, but was the result of ignorance and mismanagement. The author made comparisons with equivalent statistics from Belgium and Prussia and, in another chapter, emphasised that disease followed fixed laws and had identifiable (and hence remediable) causes, reflecting the published opinions of Farr and the statists. He therefore urged caution in using medication to mask the symptoms of disease, rather than addressing its underlying causes. This approach implied a belief in distinct disease entities, and was a long step away from the personal, anecdotal,

[55] Dewees, *Treatise*: 39.
[56] Dewees, *Treatise*: 56.
[57] Dewees, *Treatise*: 71.
[58] Eberle, J. *A Treatise on the Diseases and Physical Education of Children.* (Cincinnati: Corey and Fairbank, 1834, 2nd. ed.): 59.

empirical approach taken by his predecessors. He made links between the health of individual households and that of the districts in which they were situated, as well as the quality of the food supply. Contrary to common practice he opposed the use of opium and laudanum by children's nurses, on the subject of which he also discussed Donné's studies of a range of types of milk. Combe showed himself to be au fait with a wide range of the current research, and his conclusion was to turn traditional moral judgements on their head; where high levels of child morbidity and mortality were to be found, this was the moral responsibility not of the parents, but of those in authority who had the power to alter the environmental circumstances which gave rise to such conditions.[59]

Combe discussed what he regarded as the distinctive characteristics of childhood, explaining the extreme sensitivity of newborn infants in terms of their fragility and the need to alert their carers as soon as anything unsatisfactory occurred in their environment. His discussion of body temperature, and the difficulty faced by the premature baby in maintaining it, is based on and understanding of thermometer readings and their link with chronological age. Whilst the text displays a somewhat incomplete understanding of the digestive process in infants, Combe made the point clearly that infants had different nutritional needs from adults, and that incorrect feeding was one cause of childhood illness.[60] He stressed the importance of play as a means for promoting physical, intellectual, and moral development, and condemned harsh punishment. His discussion of maturation distinguished between the child's warm and affectionate nature and the onset of sexual feelings at puberty, reflecting his view that what was going on in children's minds was qualitatively different from that in adults', and not merely a simplified version of the same thing. His view on the overall pattern of child development contrasted with earlier generations of theorists such as Rousseau and Locke, maintaining that '...the development of human faculties, and the formation of human character, take place according to fixed laws...we may modify...but we can

[59] Combe, *A Treatise…:* 224-7.
[60] Combe, *A Treatise…:* 82-110.

neither change nor create....'[61] This suggests a belief in patterns of development which might be identified and classified, and is characteristic of the emerging view that it was possible to make valid generalisations about health.

The statistical methods which have been discussed in Chapter Two were intended to lead to a more rational method of government, and were now taken up by physicians who wished to bring that more rational approach to the practice of medicine. The growing influence on medical men of the statists' findings is apparent in an 1843 letter to the *Lancet*. A certain George A. Walker wrote that '...children are the truest barometrical indices of the sanitary conditions of a crowded neighbourhood', adding strikingly that in such areas disease was 'manufactured by wholesale' but 'treated by retail',[62] an observation which can only be taken as an attack on the effectiveness of the dispensary service and the work of such other medical practitioners as might be available. This was a concise expression of the reasoning that gave rise to the public health movement, which aimed to improve the health of whole communities by addressing structural and cultural causes and thereby preventing the onset of ill-health, rather than merely concentrating on attempting to treat individual patients once illness had struck. As Robert Owen had written in 1842:

> 'The advanced members of the medical profession know that the health of society is not to be obtained or maintained by medicines; - that it is far better, far more easy and far wiser, to adopt substantive measures to prevent disease of body or mind, than to allow substantive measures to remain continually to generate causes to produce physical and mental disorders.'[63]

This was particularly pertinent in an era when the chief role of the physician was diagnosis and prognosis, rather than cure.[64]

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[61] Combe, *A Treatise:* 370.
[62] Letter to *The Lancet*, 25th November, 1843: 266.
[63] Owen, R. "Book of the New Moral World, 3rd Part, 1842", cited in New Lanark *Robert Owen's Quest for Universal Harmony: extracts from his published works,* at <http://www.robert-owen.com/> (accessed 10.10.2009).
[64] Porter, R. *Blood and Guts: A Short History of Medicine.* (London: Penguin Books, 2002): 39.

Walker denied, however, that the higher levels of ill-health they experienced reflected the moral depravity of the poor. Instead, he took the view that the moral burden rested on the better-off. He asserted that many men, women, and children were lodged worse than the horses of the rich, and urged that society take as much care of humans as it did its animals. Walker implicitly criticised the Churches, too, with his assertion that rather than 'evangelising the heathen' they should seek to Christianise their own poor, teaching them how to lead sober and productive lives, and concentrating more on the present than on a 'happier, indefinite, non-tangible future.'[65] Despite the religious terminology he used, Walker was in fact arguing for less emphasis on spirituality and more on practical action to improve sanitary conditions by educating, rather than blaming, the poor. This would re-emerge as a theme in many of the early children's hospitals, particularly in the context of the debate over the control of nursing by religious orders.

If the most immediate influence of the statists was in the emerging public health movement, within a decade or so they were also beginning to influence new thinking about clinical practice. The statistician William Farr noted in 1838 that morbidity and mortality were regular, systematic and, hence, predictable.[66] The medical profession took a little time to appreciate the merits of his approach, although there is evidence that some at least began to adopt the statistical method. The publications by Vandeburgh, Dewees, and Combe were intended for the general, if educated, reader, but they reflect a debate which was taking place within medical circles. As Combe demonstrated, writers with an interest in public health had long been looking abroad for information, examples, and comparisons, and this interest was gradually, if sceptically, extended to mainstream medicine. By 1840 the French doctrine of the lesion had entered the awareness of the English medical profession, but was by no means unchallenged. As one critic put it, reviewing a text by a noted French physician:

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[65] Letter to *The Lancet*, 25th November, 1843: 266.
[66] Farr. W. 'On Prognosis', in *British Medical Almanack*, 1838; Supplement: 199-216; Part 1: 199-208.

> 'With Dr. Billard, it seems a sine qua non that to refer the cause of any symptom to a certain state of an organ, you must be able, after death, to point out the lesion of that organ; which is often, of course, impossible.'[67]

The critic went on to cast doubt on Billard's reliance on post-mortem examinations as a reliable source of evidence, and in fact to disparage the whole project for a systematic and evidence-based set of diagnostic criteria:

> '...yet our own [English] authors, more empirical and less scientific though they be, are more useful guides in the practical treatment of these affections.'[68]

An unsigned piece in a subsequent edition of the same journal quoted approvingly a Frenchman who attacked the idea that each disease had a specific treatment. The author maintained that every case was unique, and condemned as absurd the idea of treating every patient with the same malady in the same way.[69] These words were being written even as Farr was using morbidity and mortality statistics to demonstrate the existence of patterns of disease and making links to external factors in the environment.

One indication of the acceptance of the statistical approach within medical circles comes from the *Dublin Journal of Medical Science.* Writing in 1844, a reviewer stated that 'what we most want are carefully collected facts, and accurately observed histories of diseases, and especially of epidemics.'[70] He was not specifically demanding that this be done in hospitals, but it would clearly have been easier if there were some institutional framework within which record-keeping could be standardised. Continental hospitals such as the Kaiserin Maria-Anna Kinderspital in Vienna kept and published annual summaries of systematic records of every case treated,[71] whilst at the Pesther

[67] Review of Billard, C.M. (1839) 'A Treatise on the Diseases of Infants' in *Medico-Chirurgical Review*, v32, 1840: 400.
[68] *Medico-Chirurgical Review*, v32, 1840: 417.
[69] *Medico-Chirurgical Review*, v33, 1840: 193.
[70] Review in *Dublin Journal of Medical Science*, XXIV, 1844: 255.
[71] Hügel, *Beschreibung sämmtlicher Kinderheilanstalten*: 278-283.

Kinderspital notes were kept about each patient in the form of a journal which followed a specified format.[72]

Chapter Two mentioned Hardy's observation about the difficulty which doctors encountered during this period in agreeing on a standardised nosology. This process was initially driven by the aspiration (not yet a requirement) after 1836 to certify the cause of death when it was registered, and William Farr himself had produced three systems of classification by 1860.[73] He began by taking up broad classifications which reflected the standard medical opinion of the day, and this developed rapidly in the light of new discoveries in the mortuary and the laboratory. Publications such as those by Gream (1847)[74] and Ellis (1852)[75] demonstrate the extent to which the new statistical approach had become accepted. As well as referring to statistics of morbidity and mortality, Gream used the results of chemical analysis to justify his recommendations regarding the feeding of infants.[76] Ellis noted the need to do something about the high levels of mortality among the young and stated that this must be done through prevention because so little could be achieved in the way of cures. Ellis thus illustrates the way in which the public health model was gaining acceptance among medical practitioners whose traditional approaches were not only failing but being recognised as such, and who were looking for alternative ways of retaining their relevance and position.[77] In a book of nine chapters Ellis devoted the first four to making the case for a more systematic, evidence-based approach to the care of children and the prevention of disease, drawing extensively on statistics from both home and abroad. Following two chapters dealing with the healthy child, his seventh addressed the question of minor ailments. He agreed with Combe about the need to treat underlying causes

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[72] Hügel, *Beschreibung sämmtlicher Kinderheilanstalten*: 141.
[73] Hardy, Anne. (1994) "'Death is the Cure of All Diseases": Using the General Register Office Cause of Death Statistics for 1837-1920', *Social History of Medicine* (1994) **7** (3): 477.
[74] Gream, G.T. *Remarks on the Diet of Children; and on the distinctions between the digestive powers of the infant and the adult.* (London: Longman, Brown, Green, and Longmans, 1847).
[75] Ellis, R. *Disease in Childhood, its common causes, and directions for its practical management.* (London: G. Cox, 1852).
[76] Gream, *Remarks on the Diet of Children*: 9.
[77] Ellis, R. *Disease in Childhood*: 1-9.

rather than symptoms, for example suggesting that constipation be dealt with by a diet of fresh fruit and brown bread, rather than laxative medicines. Whereas previous generations, as exemplified by Forsyth, had repeated traditional advice to use arrowroot and farinaceous foods for weaning, Ellis showed his awareness of the latest research which had demonstrated the indigestibility of these substances to the immature gut, and likewise based his recommendation of asses' milk as the best substitute for breast milk on the results of chemical analyses which had been published in the medical press.[78]

It was during the 1840s that laboratory findings began to be taken more seriously by physicians, although as with the movement towards clinical medicine, British practitioners showed some reluctance to adopt the findings and techniques of their Continental colleagues. A short piece from 1840 reproduced a French report concerning a chemical analysis of breast milk, and comparing it with that of colostrum. The only lesson drawn from this was its use in identifying suitable wet-nurses.[79] Microscopy was gaining acceptance, however. An 1843 report gave a detailed description of cell types and development, an important step in explaining the concept of maturation which was emerging at this time,[80] in turn strengthening the arguments of those who maintained that children were physiologically distinct from adults, and so merited an equally distinct approach to diagnosis and treatment. In 1844 there appeared an account of the microscopic examination of a range of bodily fluids, including colostrums once again.[81] Chemical analysis, too, continued to be more widely cited. In investigating the passing of green stools, a Dr. Bird used chemical analysis to test for the presence of bile. He found nothing unusual, however, and while assuming that the colouring was caused by the presence of altered blood, did not actually test for it.[82]

[78] Ellis, *Disease in Childhood*: 97, 120.
[79] *Edinburgh Medical and Surgical Journal*, v 53, 1840: 241-2.
[80] *Medico-Chirurgical Review, v 38, 1843*: 188-92.
[81] *Medico-Chirurgical Review, v 40, 1844*: 503.
[82] *Dublin Quarterly Journal of Medical Science*, v1, 1846: 542-6.

During this period physicians appear to have been realising that a movement was taking place which went beyond specific discoveries by isolated individuals. By 1847 a review of two new medical texts was criticising them for their superficiality and for failing to keep up with the rapid advances in knowledge which were evident in so many publications. It attacked the author, Davis, for the lack of reference to pathology.[83] Another reviewer, writing in the *Lancet*, said of Davis' work, which was a revision of a text first published in 1799:

> '...in many respects it is most unfit for reference in practice....The addition of one man's opinions and practice to those of another produces much incongruity.'[84]

It is significant that here is a powerful demand for coherence in medical teaching. No longer was it sufficient to insist on the uniqueness of every case and the value of anecdote and personal experience.

The growing awareness of the unsatisfactory nature of contemporary medical knowledge is alluded to in a review of Fleetwood Churchill's 1849 book *On the Diseases of Infants and Children*. The reviewer begins:

> 'The period is not very remote since the diseases of infancy and childhood began to engage the distinct attention of physicians, and to form the subject of special treatises....'[85]

Writing about the lancing of the gums during teething, Churchill noted that the practice was 'more often undertaken than rightly understood or performed', indicating the need to move towards practice based on evidence rather than custom.[86] In the same year reference was being made to abnormalities of the blood, as revealed by microscopy. In order to describe blood as being 'deficient in fibrine, and likewise in red particles',

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[83] Review of Coley, J.M. 'A Practical Treatise on the Diseases of Children' and Davis, H. 'Dr. Underwood's Treatise on the Diseases of Children (10th ed.)' in *Dublin Quarterly Journal of Medical Science*, v3, 1847: 162-5.
[84] *Lancet*, 16th January, 1847: 69.
[85] Review: Fleetwood Churchill's On the Diseases of Infants and Children, in *Dublin Quarterly Journal of Medical Science, VIII, 1849*: 398.
[86] Review: Fleetwood Churchill's On the Diseases of Infants and Children, in *Dublin Quarterly Journal of Medical Science, VIII, 1849*: 404.

Battersby must have had some idea of what he regarded as normal levels of these constituents.[87] This period, then, shows rising numbers of examples of cases where inconsistencies between practitioners were not only apparent, they were becoming increasingly regarded as unacceptable.

France continued to be an important centre of clinical innovation. A Monsieur Guersant from the Clinique des Hôpitaux des Enfans provided a very systematic report on the link between rickets and fractures in children. Beginning with a description of normal bone structure, he explained how rachitic fractures differed from normal ones and described his proposed method of treatment and the longer healing time needed. This was supported by statistics from eighty cases which he had treated, [88] and shows the benefits which accrued from the French clinical approach as later described by Foucault.[89] Such an approach was only made possible by the accumulation of large numbers of similar cases at a single location such as a hospital could provide, permitting children to be examined, classified, and compared. The result was not only to achieve a more accurate system of disease classification, but through doing so to identify aspects and presentations which were specific to childhood, and even to particular stages of childhood.

Some British physicians continued to reject the new approach. While a paper by Marshall Hall sought to demonstrate the value of experimental physiology in diagnosing and treating a the complex matter of childhood convulsions,[90] a subsequent piece by McVeagh of Dublin discussed the merits of 'good air' and 'vitiated air' in purely anecdotal terms. Nevertheless, there was an increasing emphasis on the need for hard evidence rather than speculation. Taking issue with the recognised tendency for physicians to explain any mystery affliction by way of worms, the Dublin physician

[87] Battersby, F. "Observations on Enlargement of the Liver and Spleen, and Pica, in Children", in *Dublin Quarterly Journal of Medical Science, VII,* 1849: 308-20.
[88] *Lancet*, 7th February, 1846: 148.
[89] Foucault, *The Birth of the Clinic.*
[90] Hall, M. 'The Convulsive Affections of Infants and Children', in the *Lancet*, 12th June, 1847: 609-615.

Fleetwood Churchill agreed with Charles West that 'the only proof of worms being present is seeing them.'[91]

There was a growing awareness, too, of the rapid pace at which new knowledge was emerging. The very growth of knowledge and the innovations in the methods of enquiry which were now being employed were creating a new realisation of just how little was known about disease processes in general and the diseases of children in particular. There were also concerns about the extent to which the new knowledge was being successfully diffused. One doctor, Hess, complained that for all the new specialists who were practising in England, France, and Germany, their influence had been 'disappointingly moderate'. Moreover, there were no statistics in existence to demonstrate the effectiveness (or otherwise) of medical intervention in reducing child mortality. His solution was that young doctors be given practical experience in working with children, and that in particular, they be forced to concentrate on examination and observation, and weaned off 'the abuse of, and excessive reliance on, verbal examination.'[92] Here is unambiguous evidence of the statist methodology being adopted by a medical practitioner. It also addressed the greatest weakness of traditional practice when faced with the need to diagnose a child, that of the unreliability of evidence gained by verbal examination.

The next stage after observation-based research would be active and systematic experimentation in order to study the therapeutic implications of the new observation. This was not happening to any significant extent, and in 1850 it was written that

> 'The effects of medicinal agents on the young are so very dissimilar from what they are on the grown-up subject, we are almost inclined to think...that a complete treatise on infantile therapeutics has long been needed in our profession.'[93]

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[91] *Dublin Quarterly Journal of Medical Science*, VIII, 1849: 405.
[92] Hess, A. 'On the Necessity of Practical Instruction in the Treatment of the Diseases of Children', in the *Lancet*, 24th March, 1849: 341-2.
[93] *Dublin Quarterly Journal of Medical Science*, IX, 1850: 110.

Despite his evident dissatisfaction with the current state of knowledge, the author was still a little hesitant about proposing practical measures to remedy the deficiency. He went on to claim that the subject 'is treated by the profession more as a matter of enlightened empiricism, than as one founded on sound and rational physiological principles.'[94] In the space of a decade, empiricism had moved from being the approved approach for a British practitioner who might well be suspicious of foreign innovations to what now appeared to be a derogatory term. Moreover, there was a sense of pride in the new achievements. Robert Lyons wrote in praise of recent discoveries which had been made with the aid of the microscope, particularly in the fields of physiology and pathology, and argued that the defining feature of Irish medical research was its leadership in the field of histology when compared with the English and Continental schools. Lyons had hopes for practical applications of this knowledge, particularly in the accurate diagnosis of cancer.[95]

Although some correspondents continued to defend their more traditional practices (such as that of therapeutic bleeding) in the letters columns of the medical press, the medical reports at this time were concerned predominantly with the innovations produced by combining laboratory techniques with a more rational approach grounded in statistical methods. Lyons appeared in print again in 1851, claiming that the microscope was not only a useful teaching tool, since it brought the subject to life for the student, but that it was diagnostically more accurate than the stethoscope.[96] In reading this we are witnessing a stage in medicine's move from the clinic to the laboratory. This more scientific approach is epitomised by an Italian report which described a trial that was carried out on 122 children who were suffering from whooping cough. They were separated into five groups, each being subjected to a different treatment regimen. The results were then compared and conclusions drawn

[94] *DQJMS*, IX, 1850: 110.
[95] *DQJMS*, X, 1850: 236-256.
[96] Review of Lyons, R.D. 'An Apology for the Microscope', in the *Dublin Quarterly Journal of Medical Science*, XII, 1851: 157-61.

as to both which approach was most effective and which led to the highest mortality.[97] For all its methodological flaws, this is one of the first reports in the British medical press of what might be described as a controlled clinical trial. It is perhaps symptomatic of the desire for more knowledge about children in particular that such a trial made its debut investigating the therapeutics of a childhood disease. The use of large samples of patients in the hope of gaining results from which useful generalisations could be made was in the clinical tradition of French practitioners such as Guersant, but this report shows that in 1853 the focus of research was now moving from observation and classification to the active experimentation which had, by implication, been demanded in the *DQJMS* three years previously. It should be noted at this point that controlled trials were not entirely new, but relying on their conclusions was. The eighteenth century physician James Lind is remembered for his experiments with six different treatments for scurvy, but he then ignored his own findings and continued to advocate therapies which he had himself proved to be ineffective.[98]

No further reports of this kind followed in the shorter term, but the statistical approach which had been so familiar to British social investigators since the 1830s was now influencing medical researchers too. Many of the pioneering researchers, men such as Roberton in Manchester and indeed the Commissioners who carried out the Parliamentary enquiries into child labour which have been discussed in Chapter 2, were medical men, and the significance of their work was quickly appreciated by authors such as Combe, writing for a general audience. It took some 10-15 years, however, for these ideas to penetrate the medical press in sufficient quantities (as indicated in the citations in this chapter) to demonstrate their acceptability to increasing numbers of mainstream medical practitioners. In 1853, for example, a physician attempted to establish what was a normal neonatal pulse rate by taking 200

[97] 'On the comparative value of cochineal, fumigations with cherry-laurel water, the use of vegetable acids etc. In the treatment of hooping-cough', in the *Dublin Quarterly Journal of Medical Science*, XII, 1851: 243-4.
[98] Doust, J. 'Why do doctors use treatments that do not work?', *British Medical Journal* 2004; 328: 474.

observations from 140 healthy children.[99] The idea of identifying norms against which to assess patients, albeit one which had been anticipated by Horner's measurements of factory children, presupposed that there were common features of health and disease. This illustrates once again the shift which was taking place from the older, individualised methods deriving from the humoral tradition to one based on objective observation and systematic classification, while also demonstrating a detailed interest in the health of very young children who had only recently been regarded as of little concern to medical practitioners.

The debate gained a more formal recognition in January, 1854, when an editorial in the *Lancet* commented on the clash which was taking place between the proponents of 'rational' or 'young' medicine and supporters of 'empirical' medicine. It defined rational medicine as that which was supported by the test-tube and microscope, whereas its opponents defended the Hippocratic tradition of empirical observation.[100] The editorial viewed this debate as the 'battle-ground of the future', and studiously avoided taking sides. While on the one hand it recognised the benefits which would result from a close investigation of the structure and function of the human body, and the need to synthesise the many individual discoveries which were constantly being made, it denied that 'physiologico-pathology' could be a starting-point in the treatment of disease, or that knowledge of the normal function of an organ could be used to predict its pathology. Likewise, it denied that accurate pathology alone could be a basis for prescribing treatment, maintaining that empirical observation remained vital and could sometimes contradict the deductions of rational medicine. Whilst asserting the need to establish an agreement about the basis on which medicine was founded, the article concluded that 'the vast increased physiological knowledge of the last ten years has not led to comparable therapeutic advances', and that in fact the study of physiology was of no practical use.[101] There was some truth to this objection, although it ignored the time which could be required for new knowledge and techniques to filter through

[99] Report in *Dublin Quarterly Journal of Medical Science*, XVI, 1853: 458-60.
[100] Editorial in the *Lancet*, 28th January,1854: 103-4.
[101] *Lancet*, 28th January, 1854: 103-4.

into practice, as might be illustrated by the gap between the emergence of ether as a recreational drug and its therapeutic application, and indeed by the gradual and contested introduction of the stethoscope (see section 3.4). This failure to translate new knowledge into practical therapeutics raised the question as to just what could be done to improve the health of children.

3.5 Continental influences: diagnostic techniques and the use of physical evidence

The application of new diagnostic techniques in the early nineteenth century presented challenges to established medical practice which help account for the strength of feeling reflected in the debates of the period. The emergence and acceptance of these techniques is often told in terms of a narrative of steady progress towards the state of enlightenment which is modern medical practice,[102] whereas the reality was that techniques could be identified but not widely adopted until other circumstances changed, rendering them acceptable or desirable. Of particular relevance to this study, however, are the implications of these innovations for the diagnosis of young children, something which was previously thought to be unachievable in all except the most obvious cases of trauma and certain fevers.

A physician carrying out a typical consultation at this time would take an elaborate oral history from the patient, a procedure which implied the cooperation of a patient who was at least moderately articulate, and did not lend itself to the diagnosis of young children. This would be followed by an inspection of visible indications of the humours, in the form of stool, urine, and possibly sputum or mucus and vomit. The pulse might be taken,[103] but British physicians were more reluctant than their Continental

[102] See, for example, Weinberg, F. 'The history of the stethoscope', in *Canadian Family Physician,* v 39, 1993: 2223-4, and Bishop, P.J. 'The Evolution of the Stethoscope', in *Journal of the Royal Society of Medicine*, v 73, June 1980: 448-456.
[103] Porter & Porter, *Patient's Progress*: 74-5.

colleagues to make physical contact with their patients.[104] Percussion of the chest had been developed in the eighteenth century by Auenbrugger of Vienna, but its value was limited and there were in any case social taboos hindering doctors from making contact with the chests of some patients, particularly those of women.[105] It was in order to overcome this problem that René Laennec invented the stethoscope in 1816. His book *De l'Auscultation Médiate* was published in 1819 and appeared in an English translation in 1821. The manufacture and sale of stethoscopes increased rapidly and refinements of Laennec's design quickly appeared as the practice of auscultation and percussion evolved alongside it.[106] Accounts such as those by Weinberg and Bishop suggest that acceptance of the stethoscope was widespread and rapid, but an examination of contemporary accounts shows that the situation was in fact rather more complicated, and to some extent reflects the ambivalence of the medical profession in the face of medical technology which some saw as threatening to supplant professional judgement.[107]

In 1841 the *Edinburgh Medical and Surgical Journal* published a long report about a paper given in Vienna on the subject.[108] The article was systematic and detailed, but the practice was questioned by the Frenchman Donné, particularly as it might apply to children.[109] Charles West agreed that children presented particular difficulties, but also agreed with Rillet and Barthez that the practice was worthwhile.[110] The controversy must have been arousing strong feelings, because in 1847 the *Dublin Quarterly Journal of Medical Science* published a long review of a volume of reports from Guy's Hospital, concentrating on 'The Fallacies of Physical Diagnosis'. One paper, entitled 'An attack on reliance on stethoscope, auscultation, and percussion' "...formally announces the

[104] Porter, R. 'The Eighteenth Century', in Conrad, L.I., Neve, M., Nutton, V., Porter, R., and Wear, A. (1995) *The Western Medical Tradition.* Cambridge: Cambridge University Press): 402.
[105] Weinberg, 'The history of the stethoscope'.
[106] Bishop, 'The Evolution of the Stethoscope'.
[107] *DQJMS*, v3, 1847: 436.
[108] *Edinburgh Medical and Surgical Journal*, v 56, 184: 88-103, & v 57, 1842: 95-106.
[109] Review of Donné, A. (1842) 'Conseils aux Meres sur la Maniere D'Elever les Enfans' in *Medico-Chirurgical Review*, 39, 1843: 87.
[110] Review of West, C. 'Clinical and Pathological Report of the Pneumonia of Children as it prevails among the Poor in London', in *Dublin Journal of Medical Science*, XXIII, 1843: 357.

doctrine that all attempts at diagnosis founded on the observation of physical signs alone must result in failure...." [111] The reviewer concurred with this conclusion, "...which, for the last quarter of a century, has been insisted on by every writer of authority in Great Britain, Ireland, France, Germany, and America." There was a difference of approach here, however; Addison, the paper's author, insisted on the traditional view that no diagnosis could be formulated without taking into account the patient's own testimony, a view which presented a major obstacle to the medical treatment of younger children. The reviewer, on the other hand, was concerned with technical difficulties, and in particular claimed that most doctors lacked the knowledge and experience to use the stethoscope successfully. The implication here was that given time this technique might be refined into something useful. One additional problem was that both proponents and opponents of the stethoscope made exaggerated claims for their cases, and the reviewer made it clear that the practice of diagnosis through physical observation relied on far more than just the stethoscope. Noting that no physician could always count on the availability of patient testimony, he gave the example of a patient in a coma from fever, for whom diagnosis must rest on the observation of physical signs. Casting an interesting light on views of foreigners at this time, he attacked Addison for using arguments that were "unfair, and therefore un-English", and this in an Irish journal.[112] It will be seen that such suspicions are evident in other objections to the adoption of methods imported from the Continent.

Another potentially useful observation was the pulse; it is in the context of measuring heartrate and temperature that the first systematic attempts were made to establish norms against which individual children could be assessed. This approach was an extension of the statistical techniques which had been pioneered by demographers and social reformers. A reviewer writing in 1840 wrote that

> 'In England, practitioners, in general, are accustomed to attach very little importance to the pulse, as a guide for the treatment of the diseases of very

[111] *Dublin Quarterly Journal of Medical Science*, v3, 1847: 436.
[112] *DQJMS,* v3, 1847: 445.

young children; it may be, that they attach too little [as regards] the common idea of the *frequency* of the young infant's pulse, if [Billard's] observations prove to be incorrect.'[113]

A case study of a patient with scarlatina, published in 1841, noted the patient's pulse rate, but drew no conclusions from it.[114] A M. Roger attempted an investigation of children's body temperatures in 1846 in order to ascertain what might be the normal range. His report described the outcomes of hundreds of examinations, drawing a statistical picture with his findings. He made links between disease and raised body temperature and, importantly, proved the counter-intuitive point that fever patients who shiver are, nevertheless, hot.[115] This was an important step in proving how objective evidence could provide a more accurate view than the patient's own account of their condition and helped to undermine the case against attempting to diagnose young children. It should be noted that the proponents of physical examination who are cited here, from Laennec onwards and including Donné, Rillet, Barthez, Billard, and Roger, were all French. English practitioners remained much more sceptical.

Attempts to develop methods for the diagnosis of disease had led to a recognition of the need to establish first what the indications of an average, healthy child were. Not only were the French leading the way in developing diagnostic techniques, but they were also taking steps towards the medicalisation of normal childhood and thus laying claim to authority over a whole new area of everyday life. Donné, in particular, was interested in the proper feeding of infants. By the 1840s the chemical constituents of different kinds of milk had been established, and Donné was advocating preserving infant health by means of regular monitoring of children's development and growth. He established some of the first norms for weight gain in infants and argued in favour of 'scientific' childcare, in which the physician took responsibility for the health of both

[113] Review of Billard, 'A Treatise on the Diseases of Infants'.
[114] *Edinburgh Medical and Surgical Journal*, v 53, 1840: 129-135.
[115] *Lancet*, 9th August, 1845: 145-6.

mother and baby.[116] By making this claim, Donné was opening the way to a new kind of medicine, one which had hitherto only been available to the well-off; medical care was to be used as a means of maintaining health rather than simply correcting it when it went wrong. This offered a distinct role for doctors within the public health model at a time when attention was on sanitary reform and when faith in established approaches to therapeutics was weak..

The lack of knowledge of, and possibly even interest in, medical advances being made on the Continent was explicitly recognised by the establishment of the *British and Foreign Medical-Chirurgical Review* in 1843, with the specific aim of publishing translations and reviews of overseas research.[117] Techniques such as the increasing use of objective methods of diagnosis, allied to the new physiology which was arising in Germany, brought a realisation by the 1850s that Britain was far behind Europe in this field.[118] Children's diseases were being studied systematically in Europe at a time when no such study was being undertaken in Britain. Attempts were being made to establish this study as an academic discipline, and children's hospitals were the institutions where these studies could flourish. While the French were undoubted leaders in clinical investigation, the Germans were making great advances in the practice of laboratory-based physiology and medicine; in both countries the development of children's hospitals preceded that in Britain, where the results of research were slow to be assimilated into professional practice.

3.6 The Problem of Therapeutics

The issue of therapeutics was emerging as a serious problem: for all the new knowledge that was being gained about the health and physiology of children, there was little sign of any transformation in medical practice. One emerging dispute was

[116] Weaver, L.T. 'In the Balance: Weighing Babies and the Birth of the Infant Welfare Clinic,' in *Bulletin of the History of Medicine*, 2010 Spring: 30-57.
[117] Porter & Porter, *Patient's Progress.*
[118] Steedman, *Strange Dislocations.*

between those who advocated ‘heroic’ (in practice rather drastic) medicine and those who argued for moderation. Thus, an article published in 1842 and titled ‘The Therapeutics of Children’ noted the effects of vigorous growth on all aspects of the child, leading to greater vitality than is found in adults. Children, the author claimed, were more likely than adults to display ‘nervous’ symptoms, and became more rapidly debilitated by blood-letting and purgatives. The younger the child, the more pronounced these features would be. By 12-17 years children were settling down and would tolerate more active treatment.[119] Here was an approach which acknowledged the distinct approach which was required when treating children. On the other hand, the following year a Dr. J.F.Duncan, from Dublin, advocated a more ‘heroic’ approach, claiming that hot baths could be used to treat convulsions, but were ineffective if parents or nurses were reluctant to make them hot enough. If the child fainted they should simply lift it from the water. They should aim to place the child in the water for 8-10 minutes at 108°F (over 42°C), although it might prove beneficial to use even hotter water. Duncan explained his reasoning thus: ‘I fear that a false tenderness in treating the disorders of infancy mildly is partly the cause [of failures of treatment]’;[120] results would improve only when practitioners made greater or more resolute efforts with their patients, and moderating the therapy to take into account the child’s age would only diminish its efficacy. So it was that different physicians might hold completely opposing views as to the best approach to treating children, the basis for their methods being no more than their interpretation of their personal experience.

Some physicians were prepared to recognise the advances which were being made in medical knowledge whilst remaining alert to their limitations. In 1849 a Dr. Hess acknowledged the continuing difficulties in treating children, asserting that great progress had been made in improving medical knowledge but that this now needed to be extended into medical practice by training doctors properly in the treatment of children. Twenty years previously, the diseases of children had been 'almost entirely

[119] *Medico-Chirurgical Review*, **37** (1842): 104.
[120] *Lancet*, (22nd October,1843): 143.

left to ignorant and superstitious, though it may be, kind, religious, and conscientious mothers and nurses.'[121] Now the study of the diseases of infancy and childhood formed a separate branch of medicine, just as the diseases of women had long been regarded as a speciality in their own right. Nevertheless, despite the progress that would be made over the next half-century in establishing children's hospitals, the universities and medical schools were slow to acknowledge the new discipline.

G.T. Gream articulated the dilemma of medicine in the late 1840s. Whilst claiming that improved medical attention had brought about a large decrease in child mortality between 1730-50 and 1810-13, he also acknowledged the contribution of greater prosperity and improved education. Anticipating the work of McKeown, more than a century later,[122] he noted that half of all disease in children under two years of age was the result of poor diet, and held parents responsible for this; even while asserting the benefits of medical intervention, Gream was conceding what would become known as the public health case. He agreed with those who insisted on the distinct nature of children's diseases, stating that

> 'There are many diseases which belong exclusively to infancy; others there are which, although they bear an exact resemblance to diseases of mature age, require in infants treatment of a totally different character. Hence infantile diseases form a distinct branch of medical study...and although it is to be regretted that the opportunities of investigation are few in this country, owing to the scarcity of infirmaries where children in large numbers are brought together [it remains the possibility that much might be done to treat them].'[123]

If little practical progress was being made in the development of effective medical interventions, surgery, too, was making less progress than might have been expected. Ellis' account of the development of ether anaesthesia illustrates the way in which

[121] Hess, A. 'On the Necessity of Practical Instruction in the Treatment of the Diseases of Children'.
[122] For example McKeown, T,& Brown, R.G. 'Medical evidence related to English population changes in the eighteenth century'. *Popul Stud.* 1955; 9: 119–141.
[123] Gream, *Remarks on the Diet of Children.*

changes in medical technology were offering possibilities of great progress, but were adopted somewhat hesitantly. Although ether's properties as a recreational drug had been known for some decades, it was first used to ease the pain of surgery by an American dentist, William Morton, in September, 1846, and its use had spread to Britain by December of that year. There were some spectacular successes, but the trial-and-error nature of the early use of ether made outcomes very unreliable, so much so that its most prominent user, the surgeon Robert Liston, stopped using it altogether in January, 1847, and reverted to operating on conscious patients. It was at this point that John Snow brought a new approach to the matter. Firstly, he studied the vaporisation properties of ether and designed a new inhaler which could deliver it consistently. Then he observed his patients, taking detailed notes in each case. As a result, he was able to publish a textbook on the subject before the end of 1847. Snow's casebooks show that he practised the new techniques on babies and children, as well as adults. Snow was one of the younger generation of doctors, born in 1813, and far more extensively educated than many of his predecessors. By 1846 he had completed an apprenticeship as an apothecary before going on to gain his MRCS, MB, and MD, as well as being an active member of a number of medical societies. Snow personified the new, rational medicine, grounding his practice in theory and developing it through systematic trials which used samples of a substantial size.[124]

In 1848 W. Fergusson of King's College Hospital reported in the *Dublin Quarterly Journal of Medical Science* having operated on a strangulated hernia which had occurred in a seventeen-day-old infant. He did so without anaesthetic, although this new technique was discussed extensively in the same volume of the *DQJMS.* Fergusson was writing because this condition was extremely rare in a child of this age, and he hoped partly to encourage other surgeons to share any information they had on the topic, and partly to encourage others 'who might hesitate to operate on one so

[124] Ellis, R.H. 'The Case Books of Dr. John Snow', *Medical History Supplement*, 1994 (14):i-xliii.

young'.[125] Here is a clear indication of a sense that surgery was making advances, even if there was more needing to be done to improve techniques and share knowledge; and even while attempting to advance one aspect of knowledge, practitioners such as Fergusson might ignore other developments which were relevant to their practice. This, it should be noted, was at a time when the great medical interest in children was coming from physicians rather than from surgeons, to the extent that there was a complaint in the *Lancet* in 1850 that paediatric texts were generally written by physicians.[126] The development of reliable anaesthesia did not bring overnight changes; Checkland and Lamb show that only when anaesthesia was allied to antiseptic techniques in the 1870s did the quantity of surgery which was attempted increase significantly.[127] There was an awareness of the continuing limitations of surgical intervention, and so for the time being doctors would be looking for other means by which to improve children's health.

The doubts as to the practical value of the new knowledge are summed up in a debate which had taken place in January, 1849. Dr. Hughes Willshire reported to the Medical Society of London that by using microscopy he had identified that thrush was a fungal disease. What this approach could not determine was whether the fungus was merely a consequence of a pre-existing condition, as Willshire believed, or whether it was perhaps the causative agent, as Berg of Stockholm maintained. Members of the Society subsequently asserted that the study was pointless, since in any case Willshire proposed no treatment which might address the problem.[128]

So it was that at this time urbanisation, demands for professionalisation, and the emergence of new disease threats were all placing increasing pressure on the medical profession to deliver more effective results. Innovative research methods were leading

[125] Letter to the *Dublin Quarterly Journal of Medical Science*, vol V, 1848: 321-4.
[126] Anonymous. 'Report on the retention and extravasation of urine in a child of 20 months', in *The Lancet* (3.8.1850): 154-5.
[127] Checkland, O. & Lamb, M. *Health Care as Social History: The Glasgow Case.* (Aberdeen: Aberdeen University Press, 1982).
[128] Report concerning Willshire, H. 'On the Pathology of Certain Afflictions of the Mouth in Children', in the *Lancet*, 27th January, 1849: 98-9.

to new ways of thinking about disease in general and the treatment of diseases of young children in particular. New medical technologies were being adopted, if somewhat hesitantly. Nevertheless, the results were disappointing, leading some physicians to ask whether all these innovations represented any kind of practical advance at all. For those who were committed to the new approaches however, three themes were emerging with regard to child health: the recognition that the health problems of young children, and thus their treatment needs, were distinct from those of adults; there was a need for more research, and for the results of that research to be systematically disseminated; and that the best prospect for securing significant health improvements in the shorter term lay not with the therapeutic route at all, but, as Gream and others had identified, through public health intervention, and in particular through the education of parents. Chapters Four, Five, and Six will show that many of the first British children's hospitals also placed great emphasis on educating both professionals and parents, helping to achieve the goals set by Gream and others. It would be another generation before what is now accepted as the accepted medical model – diagnose, treat, *and cure*[129] – became the goal for hospitals.

3.7 Conclusions

Innovations in medical theory and practice during the two decades preceding the opening of GOSH were dominated by the adoption of more objective methods of evidence-gathering. Statistical surveys had not only drawn attention to remediable disparities in child health, but had demonstrated the value of large-scale collections of data within which patterns could be discerned and from which certain generalisations could be drawn. Tentative attempts were being made to validate or falsify such generalisations. Examples of this approach as applied to medical practice include attempts to determine norms for temperature and pulse rate. The conclusions, based on clinical observations, were augmented by laboratory investigations which

[129] Senior, M. & Viveash, B. (1998) *Health and Illness*. (Basingstoke: Palgrave): 18.

established physiological and chemical norms for bodily constituents such as breast milk. Pathological examinations identified differences between the child's and the adult's body in both health and sickness. The gradual acceptance of the existence and value of objective physiological norms undermined the traditional reliance on patient testimony as the basis for diagnosis, and opened the way to the diagnosis and treatment of young children who might previously have been considered incapable of giving a coherent account of their condition. Meanwhile, demographic statistics which highlighted disparities in mortality rates showed that high levels of infant mortality were not inevitable and were potentially remediable, thus making the attempt to understand and address the health problems of young children a worthwhile activity.

The difficulty this left for the medical profession was the therapeutic deficit. It was in the early 1830s that the crisis of confidence in the ability of orthodox medicine to make any meaningful therapeutic impact reached a peak, and many younger doctors acknowledged their powerlessness in the face of challenges such as Asiatic cholera. The conclusions of the great social investigations of the 1830s and 1840s suggested that much could be achieved in the way of ameliorating the health of the labouring classes by means of public health measures to improve housing, sanitation, water supplies, and working conditions. This posed a challenge to the medical profession, many of whom wondered what would be the role of doctors in this new approach. It was, however, clear that much work still needed to be done to understand the factors which influenced health and sickness in young children, and that doctors needed to be educated in this new discipline and to be provided with opportunities to gain practical experience. The progress that was being made in establishing norms for growth and development promised the possibility of early identification of health problems in young children, a job that was well-suited to both general and hospital practitioners and which drew them into the preventative approach which characterised the public health movement. Finally, there was a job to be done in educating parents and other carers. Chapters Four, Five, and Six will show that it was these purposes, rather than the

treatment of disease, that dominated discussion around the founding of children's hospitals.

4 Making the case for children's hospitals

4.1 Introduction

This chapter begins by examining the objections which had traditionally been raised to admitting young children to hospital, and some ways in which these objections were being challenged in the period from approximately 1830 to1850. It then considers the career of Charles West, and the influence which this had in shaping his ideas and leading him to work for the foundation of what would become the Hospital for Sick Children at Great Ormond Street (GOSH). It will be seen that West's experience of studying and working on the Continent not only influenced his ideas, but linked him to a network of doctors with a particular interest in children's hospitals, so that even before GOSH opened its doors he was gaining an international reputation as a specialist in the subject. There follows a consideration of the process by which GOSH was founded, and a discussion of the extent of the influence of Continental ideas on the aims of the new hospital. The timing of this process is significant: it will be seen that the children's hospitals founded in the years 1852-1860 came in a period when medical professionals were trying to find new ways of answering the questions about medical knowledge and practice which had been raised in previous decades. Finally, a contrast is made with the foundation of the Jenny Lind Infirmary in Norwich, whose main claim to fame is that it was the second specialist children's hospital to be founded. It opened its doors in 1853, a year after the hospital at Great Ormond Street. Records are scanty, but in comparison with the rigorous process which West and his colleagues followed in order to gain support for and determine the goals of their new hospital, the process by which the JLI was established appears to have been almost casual by comparison.

One problem facing the historian is the relative lack of material from the early days of the first children's hospitals. It is, however, also the case that the aims of the pioneers of these hospitals do not match modern assumptions about hospitals as centres of

expertise in the treatment and cure of disease. It has been shown in Chapter Three that when children were admitted to voluntary hospitals it was for therapeutic purposes, generally surgery such as draining of abscesses and cysts, cutting for bladder stones, correction of squints, and reduction of fractures. The specialist hospitals which opened also had therapeutic goals, such as the treatment of eyes, or venereal disease, or the diseases of women. In time, particularly following the introduction of antiseptic surgery, children's hospitals would follow this therapeutic path, but it is the contention of this study that their original purpose was quite different, recognising both the impotence of contemporary medical interventions and the importance of environmental factors in influencing children's health. It can therefore be difficult to make what material survives fit the standard historical hospital narrative.

Until the middle of the nineteenth century there was what was considered to be a persuasive case against the existence of children's hospitals. In 1850 there were hospitals across Europe, from Paris to Constantinople, which were dedicated to the care of children, and yet none at all in Britain; indeed, many hospitals explicitly refused to admit children despite the Continental experience (or, in the case of Paris, because of it). What changed the balance of arguments was neither the emergence of a strong business case for children's hospitals nor the development of new techniques which, for the first time, made the diagnosis of children practicable but still lacked therapeutic efficacy. The existence of other kinds of specialist hospital had not been taken as a model for hospitals for children, either, despite the well-established nature of specialisation: Moorfields Eye Hospital had been opened in 1805, for example,[1] and the Royal National Orthopaedic Hospital in 1838.[2] It was, rather, that there was by mid-century a growing demand for facilities which would allow the more systematic collection of information about children's diseases and, moreover, a swelling urge to address the problem of child morbidity and mortality which was being revealed by the

[1] Moorfields Eye Hospital, Our History at <http://www.moorfields.nhs.uk/Aboutus/Whoweare/Ourhistory> accessed 6.3.2013.
[2] Royal National Orthopaedic Hospital, History of the RNOH at <http://www.rnoh.nhs.uk/about-the-rnoh/history-the-rnoh> accessed 6.3.2013.

succession of investigation reports and demographic statistics which were being published and which have been discussed in Chapter Two.

4.2 Changing attitudes towards the admission of children to hospital

From their very beginning, the voluntary hospitals had sought to avoid treating young children for anything but the most straightforward cases. The wording used in the regulations of eighteenth century foundations is remarkably consistent. At the Liverpool Infirmary (1749) no child under seven years of age was to be admitted 'except in extraordinary Cases, as Fractures, or where cutting for the Stone, or any other Operation is required.'[3] The Leeds General Infirmary (1767)[4] and the Norfolk and Norwich Hospital (1770)[5] both refused to take children under six years but otherwise used an identical formulation. The Radcliffe Infirmary (Oxford, 1769) put it more succinctly, refusing admission to any child under seven years of age 'except where the greater operations are to be performed'.[6] The medical press shows that surgery was routinely being carried out on children of all ages, the main constraint being a certain reluctance to operate where there was a risk of death adversely affecting the surgeon's reputation. It was for this reason that advocates of children's hospitals would focus their efforts on the provision of medical care, believing that facilities were already available for carrying out all practicable surgery on children. Chapter One acknowledges the claim of Levene *et al* that voluntary hospitals had, contrary to their regulations, been treating children for medical conditions, but also that of Digby that by the middle of the nineteenth century this practice had all but stopped. By this time the great bulk of medical care for young children, such as it was, was being provided by the dispensaries.

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[3] McLoughlin, G. *A Short History of the First Liverpool Infirmary, 1749-1824.* (London: Phillimore1978): 73-4.
[4] Anning, S.T. *The General Infirmary at Leeds, vol 1.* (Edinburgh & London: E. & S. Livingstone, 1963): 81.
[5] Eade, P. *The Norfolk and Norwich Hospital, 1770-1900.* (London: Jarrold & Sons, 1900): 217.
[6] Robb-Smith, A.H.T. *A Short History of the Radcliffe Infirmary.* (Oxford: Church Army Press, 1970): 26.

The sceptical climate of opinion which prevailed up to the first half of the nineteenth century is reflected in the failure of the Red Lion Square Children's Dispensary to survive its founder's death and the inability of physicians to succeed in making the case for establishing in-patient beds at the Waterloo Road Dispensary. Both cases are discussed below. Where attempts had been made to improve the health of young children, such as at Robert Owen's experiment at New Lanark, it had been achieved through environmental improvements,[7] for it was generally held that the admission of sick children to hospital was neither necessary nor desirable. Porter and Porter show that in the early nineteenth century hospitals were merely places where care could be delivered for people who had nobody to provide it in their own homes. Children (other than orphans and foundlings, for whom special arrangements were made) should be looked after by their parents.[8] Commenting on the unacceptably high levels of mortality among its patients, the Board of the Manchester Royal Infirmary noted in 1861 that the purpose of hospitals was to care for those people who could not be treated effectively in their own dwellings.[9] In any case, the care of children was seen as women's work, and not the proper province of male physicians. It has been shown in Chapter Three that the model of care practised by physicians before the mid-nineteenth-century made little use of physical examination, treating ill-health as a personal phenomenon, every case being linked to the patient's individual characteristics and circumstances. The patient's personal testimony was crucial in enabling a physician to diagnose the condition and arrive at a prognosis, and children were regarded as being unable to give an accurate or reliable history. This in turn led to doctors having little experience of treating children and, therefore, little knowledge of children's diseases.[10]

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[7] Bloy, M. *The 1802 Health and Morals of Apprentices Act* at <http://www.dialspace.dial.pipex.com/town/terrace/adw03/peel/factmine/1802act.htm> - accessed 15.11.06.
[8] Porter & Porter, *Patient's Progress*: 183-5.
[9] Brockbank, W. *Portrait of a Hospital, 1752-1948: To commemorate the bi-centenary of the Royal Infirmary, Manchester.*(London etc: William Heinemann, 1952): 107.
[10] Porter & Porter, *Patient's Progress:* 183-5.

Lomax acknowledges the medical arguments against the admission of young children to hospital, but her emphasis here, as in the explanation she offers for the eventual creation of children's hospitals, is essentially economic. Making comparisons with the attitudes which underlay the reform of the English Poor Law, she notes the strong opposition which existed towards tax money being taken from the rich and used for social purposes such as the support of the improvident poor, and also more broadly to state or charitable involvement in family life, which was seen as undermining parental responsibility. There was a widely-held view that by providing for the care of sick children for whom parents could not afford to provide, charities would create an atmosphere in which parents would continue to bring offspring into the world, secure in the knowledge that somebody would step in to offer care if the parents could not, an attitude which Lomax describes as surviving well into the nineteenth century.[11]

When George Armstrong opened his Children's Dispensary in London's Red Lion Square, in 1769, he did so out of the conviction that an in-patient service for children could never succeed. Reflecting on his achievement in 1777, Armstrong wrote that

> 'Several Friends of the Charity have thought it necessary to have a House fitted up for the reception of such Infants as are very ill where they might be accommodated in the same Manner as Adults can in other Hospitals. But a very little Reflection will clearly convince any thinking person that such a scheme can never be executed. If you take a Sick Child away from its Parent or Nurse you will break its Heart immediately: and if there must be a Nurse to each Child what kind of Hospital must there be to accommodate any number of them? Besides, in this case the Wards must be crowded with grown Persons as well as Children; must not the Air of the Hospital be thereby much contaminated?'[12]

[11] Lomax, *Small and Special*: 2.
[12] Armstrong, G. (1777) ´A General Account of the Dispensary for the Infant Poor`, cited by Schneider, D. & Macey, S.M. ´Sick Babies, Few Choices: A Historical Geography of Medical Care and Facilities for Infants and Children`, in *FOCUS on Geography*, **48**, No. 2, Winter 2004: 9-17.

Armstrong's Red Lion Square dispensary was never financially strong, and it closed following his death in 1789.[13] Writing forty years later, Johnston reflected the growing concern that overly-kind treatment might leave patients unfitted for the rigorous life to which they would have to return upon discharge:

> ´The contrast between the comfort a patient receives in an hospital, and what he has been accustomed to at home, ought on no account to be too great, as it may produce discontent. In children's hospitals this is particularly to be avoided; yet in these there is often a great deal too much attention paid to all the wants and conveniences of the inmates. They are accustomed to comforts, and brought up with ideas that render them in some degree unfit to put up with the indifferent habitations and inferior treatment they encounter, when, after leaving the hospital, they enter upon the business of life.`[14]

It will be shown below that these sentiments are diametrically opposed to those espoused by Charles West when he opened Great Ormond Street Hospital, some 23 years later.

It was the hospital mortality statistics which had made the most lasting impact, however. In 1840 a review of a work by the French physician Charles-Michel Billard, the reviewer wrote that

> 'The French system of foundling hospitals, not only produces a lax morality, by offering every facility to the reckless incurring, and heartless abandonment of maternal responsibility – to the severing of those ties between mother and child, which the very brute creation teaches us to respect; but also, by the congregation of

[13] Dunn, P.M. *George Armstrong MD (1719–1789) and his Dispensary for the Infant Poor* <http://fn.bmj.com/cgi/content/full/87/3/F228> downloaded 18.11.07.
[14] Johnston, *A General, Medical, and Statistical History of the Present Condition of Public Charity in France*: 159-60.

young children, which renders it unavoidable, becomes a frightful source for the generation of infantile disease and mortality.'[15]

Florence Nightingale had a very limited conception as to the role of a hospital, and her views, for all that she came to be take as an expert on both the art of nursing and the designing of hospitals, perhaps illustrate the difficulties which surrounded the question of treating children when so few people had any real practical knowledge of the subject. Nightingale's entire nursing experience had been gained whilst caring for adults, most of whom were soldiers. As she made clear in *Notes on Nursing*, surgical nursing was for her the real thing, 'practical, manual nursing'.[16] (West had proposed, albeit unsuccessfully, that no surgeon should be appointed at all at Great Ormond Street.)[17] For all her skills as a propagandist for hospital reform, where children's hospitals were concerned Nightingale was pontificating about matters of which she knew very little.

Even after the opening of GOSH, Nightingale would continue to campaign against the necessity of creating children's hospitals, or indeed of admitting children to hospital at all. In 1859 she wrote that

'The causes of the enormous child mortality are perfectly well-known; they are chiefly want of cleanliness, want of ventilation, want of whitewashing; in one word, defective *household* hygiene. The remedies are just as well-known; and among them is certainly not the establishment of a children's hospital.'[18]

Nightingale objected to demands for a children's hospital on the grounds that the main cause of child mortality was poor household management.[19] She had two further objections to admitting children to hospital: one rested on her theory of disease, the

[15] Review of Billard, C.M. (1839) 'A Treatise on the Diseases of Infants' in *Medico-Chirurgical Review*, v32, 1840: 400.
[16] Nightingale, F. *Notes on Nursing: What it is, and what it is not.* (London: Longman, Green, Longman, Roberts, and Green, 1859): 151.
[17] Higgins, T.T. *"Great Ormond Street".* (London: Odhams Press, 1952).
[18] Nightingale, *Notes on Nursing*: 15.
[19] Nightingale, *Notes on Nursing*: 15.

other related to the practicalities of caring for children. Many of her views were becoming outdated by the time she was publishing them in the 1860s. She believed in the miasma theory, maintaining that disease arose spontaneously wherever there was dirt and then spread in the foul air that resulted. She denied the possibility of diseases spreading by contagion, 'for diseases, as all experience shows, are adjectives, not noun substantives'[20] – in other words, diseases were merely symptomatic of the prevailing conditions, and had no independent existence as entities in their own right. It followed from this that there were no such things as children's diseases, simply ill-health which happened to occur in children. Children's health, she wrote, is affected by the same influences as is that of adults, but children respond much more quickly and seriously, so the difference between a child's response to illness and that of an adult was quantitative rather than qualitative.[21] There were, however, those who recognised that children responded to disease in ways which differed from those of adults. Charles West, with extensive experience which Nightingale lacked, made the point that 'the signs of disease [as opposed to its rate of progress] differ...according to the age of the child.'[22] According to Nightingale the chief threat to health came from foul air, especially at night, and children would react to this more quickly than would adults. Thus, children could quickly become foci of disease. She was, in any case, doubtful as to the prospects of successfully diagnosing and treating children, since she subscribed to the traditional view that they were unable to make their opinions known coherently. Whilst West agreed with this view up to a point, he maintained that accurate observation by competent nurses could provide the necessary information.[23] He presumably had more faith in nurses' abilities in this respect than did Nightingale the great nurse.

[20] Nightingale, *Notes on Nursing*: 47.
[21] Nightingale, *Notes on Nursing*:185.
[22] West, C. *How to Nurse Sick Children; Intended especially as a help to the nurses at the hospital for sick children: but containing directions which may be found of service to all who have charge of the young.* (London: Longman, Pearson, Green, and Longmans, 1854): 23.
[23] West, *How to Nurse Sick* Children: 26.

The practicalities of caring for children also presented problems for Nightingale. Each child patient, she believed, required a nurse to itself, and the only way to provide the necessary level of care in a cost-effective fashion was to mix children with female patients and require the women to help care for the children. 'It is a matter of universal hospital experience that this intermingling of ages is essential'.[24] Helping in this way would also be of benefit to the women whilst in hospital, in that it would keep them usefully occupied, and it would, moreover, have the effect of diluting the concentration of disease which children would otherwise create. In fact, it was far from universal hospital experience that this was the case: by 1852 there were at least fourteen European hospitals dedicated solely to the care and treatment of children.[25] Given that Nightingale had visited the children's hospital in Hamburg in 1850, and had spent three months at the deaconess' institution as Kaiserswerth in the same year, she would have been well aware of this fact.[26]

One other possibility was the creation of separate children's wards within what were otherwise adult hospitals. Nightingale opposed this on the grounds that such wards had all of the disadvantages and none of the advantages of a children's hospital.[27] Her views in this matter were, however, confused by her moral outlook. Whilst the nursing care of children demanded that the work be shared with the older patients and the miasmas diluted by the presence of adults, she was concerned about the moral harm to which children were vulnerable whilst in hospital. She worried that in an adult hospital children would see things which they should not. Moreover there was the risk of coming into contact with the opposite sex: thus, not only should there be separate bathing facilities, but classrooms and chapel should be segregated and even the garden should have separate areas for boys and girls.[28] Her emphasis on moral

[24] Nightingale, F. *Notes on Hospitals.* (London: Longman, Green, Longman, Roberts, and Green, 1863): 124.
[25] Lomax, *Small and Special*: 15.
[26] Nightingale, F. *The Institution of Kaiserswerth on the Rhine, for the Practical Training of Deaconesses.*(Düsseldorf-Kaiserswerth: Diakonissenanstalt, 1959).
[27] Nightingale, *Notes on Hospitals*: 126.
[28] Nightingale, *Notes on Hospitals*: 128-9.

priorities over health considerations is illustrated by her insistence that girls should always wear a frock when being bathed unless their condition made this impossible.[29] This was a very different view from that of West, who advocated bathing every child on admission, not just because it was a pleasant and calming experience, but because it enabled the nurse to conduct a complete physical examination, something which required the child to be naked.[30]

Above all, Nightingale believed that not one man more than was absolutely necessary ought to be permitted in a children's hospital: 'Women must be in undisputed charge of a children's hospital, saving, of course, the direction of the medical service.'[31] In this she was making a practical, rather than proto-feminist, point, believing that nursing was work that was best left to women, just as the practice of medicine was best left to men. She deplored nurses being put under male authority, but objected equally to the notion that nurses should be in overall charge of the hospital. Even in the segregated garden which she advocated for children, general supervision should be overseen by a 'sister', but exercises needed to be led by a male 'professor'.

Nightingale had no romantic illusions about children. A footnote refers with distaste to 'certain children's habits, which I can no more than allude to here…which render the strictest supervision necessary.'[32] Although she wrote that 'it is the real test of a nurse whether she can nurse a sick infant,'[33] and for all that she was aware of the emotional demands a sick child made on the nurse,[34] she appears to have treated the matter chiefly as an administrative rather than a human problem. It is particularly striking in this regard that she says more about the care of children in her *Notes on Hospitals*

[29] Nightingale, *Notes on Hospitals*: 123.
[30] West, *How to Nurse Sick Children*: 27.
[31] Nightingale, *Notes on Hospitals*: 132.
[32] Nightingale, *Notes on Hospitals*: 126.
[33] Saunders, D.M. 'Sick Children's Nursing' in Allan, P. & Jolley, M. *Nursing, Midwifery and Health Visiting Since 1900*, (London, 1982): 141-149.
[34] Nightingale, *Notes on Hospitals*: 125.

than she does in *Notes on Nursing*. Where she does allude to the nursing of children, it is largely in terms of regimen rather than nurture.[35]

Despite all the doubts, demand was slowly growing for some kind of provision for medical treatment for young children, even if only on an out-patient basis. The first durable institution for the care of sick children in Britain was the Universal Dispensary for Sick Children, founded by John Bunnell Davis in London's St. Andrew's Hill in 1816. This soon established outstations in neighbouring boroughs. In 1823 it moved to Waterloo Road as the Royal Universal Infirmary for Children. Davis had previously studied in London, Paris, Montpellier, and Edinburgh. His aims were:

1. To reduce the number of infant deaths
2. To provide a central point of attention for the investigation of the diseases of children and young persons
3. To give lectures to medical students and to educate parents by circulating leaflets[36]

Despite these aims, which will be seen in some ways to foreshadow those of Charles West at Great Ormond Street, in practice the Infirmary never progressed beyond working as any other children's dispensary. Davis had spent time in Paris and is said by Franklin to have opposed the admission of children as in-patients on the grounds that it was just too dangerous,[37] although Loudon asserts that when the Dispensary moved to new premises in 1823 the building was designed with two wards which were intended for in-patients.[38] These, however, were not used for this purpose. Davis died in 1824, and with the loss of its dominant personality the Dispensary lost much of its impetus, much as had happened with the Red Lion Square Dispensary. The idea of

[35] Nightingale, *Notes on Nursing*: 83-4, 89, 91, 133-6.
[36] Schneider, D. & Macey, S.M. 'Sick Babies, Few Choices: A Historical Geography of Medical Care and Facilities for Infants and Children*', Focus on Geography*, **48**, 2: 9-17, Winter 2004.
[37] Franklin, A.W. 'Children's Hospitals', in Poynter, F.N.L. *The Evolution of Hospitals in Britain.* (London: Pitman Medical, 1964): 103-121.
[38] Loudon, I.S.L. (1979) 'John Bunnell Davis and the Universal Dispensary for Children', in *British Medical Journal*, 5th May 1979: 1192.

opening in-patient beds was revived after 1839, when Charles West joined the infirmary, although not implemented in West's time there.[39]

Chapter Three has discussed the brutal nature of both medical and surgical care during the early-mid-nineteenth century period, and the rising level of concern about the ineffectiveness of medical interventions in particular. The fear which this concern raised in the general public is illustrated by the example of St. Mary's Hospital, Manchester, where many parents were reluctant to commit their children to admission as in-patients unless it were wholly unavoidable – this was in the age before anaesthetics and antiseptic surgery, and many patients died from their treatment. As Chapter Three has shown, it was the reluctance of people to submit themselves or their children to drastic and expensive treatments which did little good that led to the rise in popularity of homeopathy in the 1830s and 1840s.[40] When Great Ormond Street Hospital opened in 1852, it, too found that admissions were slow to come at first, although they picked up as its reputation spread.[41]

Objections continued to be made by institutions which felt themselves to be threatened by competition from the new hospitals. The original initiative for a children's hospital in Glasgow was made in 1861, and yet opposition from the Glasgow Royal Infirmary delayed the opening of such a hospital until 1881.[42] This was partly out of fear of competition for charitable funds, an objection to all specialist hospitals which was expressed by the Medico-Chirurgical Society of Glasgow, and partly because individual physicians and surgeons feared losing lucrative private patients to specialist hospitals. When faced with the 1861 proposal, the Royal Infirmary suddenly acquired twelve cribs of its own where none had previously been thought necessary.[43] Similar concerns would be subsequently voiced in Belfast, following the opening of the Sick Children's

[39] Franklin, "Children's Hospitals".
[40] Pickstone, J.V. *Medicine and Industrial Society: A History of Hospital Development in Manchester and its Region, 1752-1946.* (Manchester: Manchester University Press, 1985): 108-9.
[41] Abel-Smith, B. *The Hospitals, 1800-1948.* (London: Heinemann, 1964): 25.
[42] Robertson, E. *The Yorkhill Story.* (Glasgow: The Board of Management of Yorkhill and Associated Hospitals, 1972).
[43] Robertson, E. *The Yorkhill Story.* (Glasgow: The Board of Management of Yorkhill and Associated Hospitals, 1972).

Hospital in 1873: its success in collecting funds had an adverse effect on the General Hospital, whose managers then cast doubt on the need for such an institution as a children's hospital.[44]

As interest in child health grew during the 1840s, there was an increasing awareness of the lack of experience which most doctors possessed in treating children, owing largely to the long-held belief that the accurate diagnosis of sickness in children was impossible and thus treatment futile. Chapter Three has noted Hess' observation that the care of sick children had hitherto been left to mothers and (domestic) nurses. He went on to observe that medical men had little knowledge of such conditions, but that there had been great progress of late, particularly through the study of morbid anatomy, and the study of the diseases of infancy now formed a separate branch. All the new knowledge had, though, provided little practical advantage, and despite the emergence of specialists in children's diseases in England, France, and Germany, their influence had been 'disappointingly moderate'.[45] This was, said Hess, because of a lack of practical instruction; medical men were often unprepared for dealing with children, and practical experience could form a useful part of their training. Finally, Hess noted that much more had been done in France, Sweden, and 'even Russia' by way of establishing clinical hospitals, wards, and lectures, and by the creation of policlinics at German universities.[46] The message was clear: it was time for Britain to establish its own clinical hospitals where systematic practical teaching could take place. As another journal put it:

> 'We need an *Hôpital des Enfans Malades* in the metropolis, near the schools of medicine; we need men of admitted ability, professional, scientific, and literary, able to stand side by side with the officers of hospitals for adults, prosecuting the study of

[44] Calwell, H.G. 'Care of Sick Children in Belfast in the Nineteenth Century', in *Journal of the Royal Society of Medicine*, **72**, (1979): 707.
[45] Hess, A. 'On the Necessity of Practical Instruction in the Treatment of the Diseases of Children', in the *Lancet*, 24th March, 1849: 341-2.
[46] Hess, A. 'On the Necessity of Practical Instruction in the Treatment of the Diseases of Children', in the *Lancet*, 24th March, 1849: 341-2.

a special pathology and treatment in its wards, and hence able and willing to impart the results of their experience to the rising generation.'[47]

4.3 Charles West

It was during this period that Charles West became a significant figure in the movement for children's hospitals. No full biography of West has been written.[48] Born in London in 1816, West was one of the best-qualified people to take up this task. Apprenticed in 1831 to a Mr.Gray, a general practitioner and former apothecary, by 1833 West was working at St. Bartholomew's Hospital in London. In 1835 he studied at the University of Bonn, where he won a prize for an essay on the female pelvis and its influence on childbirth, and he then went on via Paris to Berlin, where he graduated MD in 1837. Thus, by the age of 21 West had already had a broad and cosmopolitan medical education. He then moved to London, where he took a share in a medical practice which failed, so he moved to Dublin, where he studied at the Rotunda Lying-in Hospital, following which he returned to St. Bartholomew's Hospital. In 1842 he gained his membership of the Royal College of Physicians and became physician to the Waterloo Road Dispensary for Women and Children.[49] This institution underwent frequent changes of name as its fortunes and ambitions changed; these included Universal Dispensary for Children (1816), Royal Universal Dispensary for Children (1821), Royal Universal Infirmary for Children (1824), Royal Infirmary for Children (1843), and Royal Infirmary for Children and Women (1852), with further changes in 1875 and 1903.[50]

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[47] 'On the Diseases of Children', in *British and Foreign Medico-Chirurgical Review,* 3 (1849): 406-32.
[48] According to a personal conversation with the Archivist at the Great Ormond Street Hospital, West ended his career having fallen out with the GOSH management and married a Roman Catholic. They then emigrated happily to the south of France having destroyed many of his personal papers. I have no documentary evidence of this.
[49] Matthew, H.C.G. & Harrison, B. (eds) *Oxford Dictionary of National Biography, v58.* (Oxford: OUP, 2004): 216.
[50] Loudon, 'John Bunnell Davis and the Universal Dispensary for Children': 1191.

According to one source, while in Dublin West spent some time working at the Pitt Street Institution, which was founded in 1821. The author claims this as the first teaching children's hospital in Britain and Ireland, although it appears to have been a dispensary, with no in-patient beds, until some considerable time later. Its three objectives were:

1) To provide free medical and surgical aid to sick children
2) To educate students in infantile diseases
3) To educate mothers and nurses regarding the proper management of children – both in health and disease[51]

It is possible to contrast them with those of the Waterloo Road Dispensary. Pitt Street did not specify that its patients should be poor, nor that it would be undertaking investigations into the nature of childhood diseases. West spent only a short time in Dublin, dividing it between Pitt Street and the Rotunda Maternity Hospital, and while it provided him with his first significant experience of a children's dispensary, the nine years he spent at Waterloo Road would have been the formative ones.[52] So it was that his aims for GOSH would align much more closely with those of the Waterloo Road Dispensary.

West continued to work both at Waterloo Road and at Bart's while being appointed lecturer in midwifery at the Middlesex Hospital, and physician accoucheur there in 1846. His lectures on the diseases of children were published in the *Medical Gazette* in 1847 and subsequently in hardback, a best-selling text which ran to five editions over two decades. In the Introduction to the lectures in book form, West explained his rationale for undertaking the lectures as a separate series, distinct from the one on midwifery with which they would traditionally have been associated. Although he did not use the term 'maturation', he described some ways in which the child's body is not

[51] Jeffries, I. 'The National Children's Hospital of Dublin, Ireland', *International Pediatrics*, **14** (1) 1999: 54-57.
[52] Loudon, 'John Bunnell Davis': 1194.

only growing but moving from its incomplete to its complete form, 'undergoing modifications to fit it for new duties, as well as growing in size and strength.'[53] Any disease which hindered this process would have long-term consequences for the child's healthy development, and so must be addressed immediately. However, to treat children was more than a matter of adapting the strength and doses of medicines; it required the practitioner to 'study a new semeiology [*sic*], to learn a new pathology, and new therapeutics.'[54] In order to succeed in this discipline, the practitioner must un-learn the diagnostic techniques they practised with adults and begin again. In particular, not only would child patients fail to respond effectively to verbal questioning, but they might well react badly to attempts at physical examination such as auscultation. Problems would then arise when practitioners who had failed to master the techniques required for examining a child attempted to explain their failure in terms of the intractability of the case. West also stressed that time must be taken to gain the child's confidence – such consultations would last considerably longer than might be expected with an adult patient. West went into some detail as to how the examination might proceed, and how the doctor should devise a methodical line of enquiry. He urged his students not to underestimate the value of information given by a mother or nurse, and stressed the need to win and retain the child's affection if the treatment is to succeed.[55]

West was basing this extensive account on his own experience; in the preface to the second edition he claimed to have treated nearly fourteen thousand children, and in his introduction he alluded to the mistakes he had made and from which he had learned.[56] For the purposes of this lecture series he was drawing on records of six hundred children he had treated. His conclusions relate not only to the care of specific conditions but to the therapeutic relationship – here is a philosophy of care which, it will

[53] West, C. *Lectures on the Diseases of Infancy and Childhood.* (Philadephia: Blanchard and Lee, 1854, 2ed.): 17.
[54] West, *Diseases of Infancy and Childhood*: 18.
[55] West, *Diseases of Infancy and Childhood*: 34.
[56] West, *Diseases of Infancy and Childhood*: iv.

be seen below, informed not just his own practice but the approach he would lead at GOSH. West was aware of the child as an individual, with characteristics and needs quite distinct from those of adults, and whose care thus merited a distinct approach. Boehm notes that West's book was one of the first of its kind to be aimed solely at medical professionals, classifying diseases by pathology rather than by symptoms and discarding the general childcare information which was found in earlier manuals.[57]

In 1847 Franz Hügel, founder of a children's hospital in Wieden, Vienna, had surveyed all the children's hospitals in Europe, and had commented with amazement on the fact that a great world city like London should lack one. Such was his surprise at this state of affairs that he wrote to West to ask why this should be. The book reproduces West's reply in full, taking more than five pages to do so.[58]

West's reply demonstrated his embarrassment at not being able to describe a more satisfactory state of affairs. He explained that it had never been possible to raise the necessary funds to allow the opening of in-patient beds at the Royal Universal Infirmary, but that children were admitted there from birth to their fifteenth birthday, and that much of the treatment took place in children's own homes. He stated specifically that the basis for the treatment was allopathic, placing the Waterloo Road Infirmary firmly in the European medical mainstream. In fact, much of West's account appears designed to emphasise the institution's resemblance to the European model which he aspired to emulate, and in particular to the hospitals which were found in the German-speaking lands. Alluding to the strong academic tradition which was emerging in child medicine in cities such as Vienna and Budapest, West explained that no lectures had been given at the Infirmary for thirty years, but that it was intended that this should soon be rectified and in the meantime he was to deliver his own series of lectures on

[57] Boehm, K. '"A Place for More than the Healing of Bodily Sickness": Charles Dickens, the Social Mission of Nineteenth-Century Paediatrics, and the Great Ormond Street Hospital for Children,' *Victorian Review* (Spring, 2009) **35** (1): 153-173.
[58] Hügel, F.S. *Beschreibung sämmtlicher Kinderheilanstalten in Europa: nebst einer Anleitung zur zweckmässigen Organisation von Kinder-Krankeninstituten und Kinderspitälern, mit Beiträgern zur Geschichte und Reform sämmtlicher Spitäler im Allgemeinen.* (Vienna: Kaulfuss Witwe, Prandel & Comp., 1848): 93-99.

the diseases of childhood, lectures which would then be published in the *London Medical Gazette*. He described the way in which medical record-keeping had been standardised [much as had been done in Vienna by Mauthner, who is further discussed below], and provided statistics to demonstrate the scale of work which had been achieved over the last thirty years. He described the plans to raise funds for an in-patient department, which it was hoped would be opened within a year [it was not], and explained that the failure to achieve this up to this time was because of the early death of Davis, the Infirmary's founder.[59]

It says a lot for the reputation that West was establishing for himself that Hügel should have written to him at all at this time, before the campaign to open Great Ormond Street Hospital and even before West's own enquiries to European hospitals. He did so knowing of West's professional and academic standing, because in the last months of 1846 he had heard that a children's hospital was about to be opened [presumably an expansion of the Royal Universal Infirmary], and he wanted more information about it. West described the way in which honorary titles were distributed in order to secure patronage and stressed that the medical staff donated their services free of charge. He apologised for not being able to send a more favourable report and said that he had shown Hügel's letter to a number of highly-placed individuals to demonstrate just what England had to achieve if it were to stand on an equal footing with other nations.

West's claim that it had always been intended that the Infirmary should be a full hospital and that only lack of funds had prevented this from happening was less than wholly true, given the attitude displayed by his fellow committee members. They repeatedly failed to take up any of his suggestions for expansion until, in 1849, he resigned from frustration at the lack of progress. Still nothing was done until the publication in 1850 of the announcement which would lead to the opening of Great

[59] Hügel, *Beschreibung sämmtlicher Kinderheilanstalten*: 93-8.

Ormond Street Hospital. It would be another six years before the Infirmary admitted its first in-patients.[60]

Here is evidence of West's embarrassment at having to admit to a foreign doctor who had real achievements to his name just how things stood in England. Whilst defending his own reputation, West admitted that amid the many well-funded charitable institutions which were to be found in London, the Red Lion Square Children's Dispensary had failed for lack of financial support from the public once Armstrong's death ended his subsidies, and the Waterloo Road Dispensary raised more money by holding charitable dinners than it did from its subscribers. Whilst demonstrating his understanding of the workings of the patronage system, he provided little sign of any ability to work it to his own ends. His subsequent career at Waterloo Road shows that his possession of Hügel's letter had similarly little effect. Hügel was not the only person to turn to West when a British authority on children's hospitals was sought. The Belfast Fever Hospital was opened in 1817 and always admitted children for a range of conditions in addition to infectious diseases. In 1848 it ceased to treat infectious diseases and became a general hospital, at which point children were systematically excluded. As this time approached, in 1847 a physician named Andrew Malcolm was running a dispensary for infants and children of the poor, and conceived the idea of opening a children's hospital. He wrote to West for advice, but West's reply was discouraging:

> 'The institution with which I am connected (The Royal Universal Dispensary for Children) is in reality no infirmary, but merely a dispensary, so that no information would be of service to your enquiries…. P.S. It may save you more trouble if I add that much as it is to be regretted there is in London no hospital for Children.'[61]

Nothing came of Malcolm's project and Belfast's first hospital for sick children opened in 1873.

[60] Loudon, 'John Bunnell Davis and the Universal Dispensary for Children'.
[61] Calwell, 'Care of Sick Children in Belfast': 707.

Convinced of the need for London to have its own dedicated children's hospital, West visited every London physician to canvass support.[62] It was at the Royal Universal Infirmary that he had acquired his experience of and enthusiasm for working with children. He spent several years trying to persuade the Committee to open in-patient beds, and got as far as having a resolution passed which stated that they 'regarded their work only half-done until they could admit in-patients.'[63] It has been suggested that West's determination sprang from his experience of visiting sick children in the homes of the poor and his growing awareness of the link between poor standards of housing and hygiene in the community and high levels of child morbidity and mortality.[64] (He would have gained practical experience of these from his time in Dublin, particularly at the Pitt Street Institution, and at the Waterloo Road Infirmary). Nevertheless, no progress was made. The management of the Infirmary was less than dynamic; in 1844 an average of five out of the thirty members attended committee meetings, of which one was always West himself. He finally resigned out of frustration in 1849.[65] In 1849-50, following his failure, he investigated the facilities for treating children at the other London hospitals. In July of 1849 he also wrote letters of enquiry to every children's hospital on the Continent. One reply, from a Dr. Behrend of Berlin and dated 25th August, 1849, offered advice about sources of information which West could use to support his campaign. Behrend cited in particular the many tables of mortality statistics which had been published, and referred West to Franz Hügel as the author of the key text on the subject. He also answered West's technical queries about the care of children with infectious diseases and listed the names of doctors in thirteen European cities who were involved with children's hospitals and to whom West might turn for further information. Eleven of these were in German-speaking Europe,

[62] Matthew and Harrison, *Oxford DNB*, vol. 58: 216.
[63] Loudon, *John Bunnell Davis*: 1193.
[64] Franklin, *Children's Hospitals*: 103-121.
[65] Loudon, *John Bunnell Davis*: 1193.

reflecting the lead which the German states and Austria-Hungary had established in this field; the others were in Stockholm and Moscow.[66]

Another reply, dated 20th August, came from Mauthner of Vienna. Mauthner claimed to know of West from his writings and described a visit he had paid to London in 1838 [the year after he founded the first children's hospital in the German-speaking world]. He had found no children's hospital, but had visited the Middlesex Hospital, where he had seen children being treated but had noted the absence of a separate children's department. He wanted to know more about the Royal Universal Infirmary with which West had claimed an association, but stated that he suspected that this was no more than a dispensary – an embarrassment to which West referred in his letter to Hügel. Mauthner described the financial constraints within which he was operating and recommended that West begin with a small number of beds in order to give the public time to become accustomed to the idea of such a hospital. He went into some detail about ward sizes, staffing ratios, costs, and the necessity of planning for the eventuality of treating children who were suffering from infectious diseases. Mauthner's information seems to have been put to good use, because when GOSH opened in 1852 its managers would follow much of his advice including treating children with infectious diseases, contrary to general practice in British voluntary hospitals of the time. Mauthner also stressed the need to keep mortality figures secret, in order to protect the hospital's reputation; this supports the argument that one reason for physicians' reluctance to admit children to hospital was for fear of the harm that the generally high child mortality rates would do to their own reputations and those of the institutions which they served. This sensitivity did not reflect the reality: overall, the

[66] *Letter from Dr. Behrend to Mr. Charles West, M.D., Physician to St. Bartholomew's Hospital etc. etc.*, held at the Great Ormond Street Hospital Archive.

Vienna children's hospital's mortality rate was, at 15%, no higher over an equivalent period than for children living in the community.[67]

Having finally resigned from Waterloo Road in November, 1849, West followed the advice of a colleague, Richard Bright, and managed to arrange a meeting with Dr. Henry Bence Jones in January, 1850. This was to be the turning point in West's campaign, since Bence Jones, best known for his chemical analytical skills, was, unlike West, socially well-connected. As Bence Jones later wrote, 'At that time I had many influential friends, and with their help I was able to form a provisional committee which had considerable influence.'[68] Just as Bence Jones appears to make light of his contribution, so do biographical writings by authors such as Kyle and Rosenfeld, treating it as little more than a footnote in an illustrious career.[69] The partnership was one of convenience, but Bence Jones provided the social connections, and quite possibly the social skills, which West lacked but which were essential for establishing a voluntary hospital. His influential friends included

> '…Lady Byron, the poet's widow, and her daughter, the Countess of Lovelace; the Earl of Shaftesbury, the great reformer and champion of defenceless children, who became chairman of the provisional committee and then the first president of Great Ormond Street; Baroness Burdett-Coutts, the richest woman in England and a famous philanthropist; the Earl of Carlisle, and the Bishop of London. Charles Dickens was associated with them in many schemes of reform. Dickens' brother-in-law, Henry Austin, and friends, Dr. Southwood Smith and Edwin Chadwick, all on the

[67] *Letter from Dr. Mauthner to Mr Charles West M.D, Physician to the ~~Bartholomew's Hospital~~*[crossed out by Mauthner] *and to the Dispensary for the Children etc etc.* held at the Great Ormond Street Hospital Archive.
[68] Kyle, R.A. 'Historical Review: Henry Bence Jones – Physician, chemist, scientist and biographer: a man for all seasons,' in *British Journal of Haematology*, 2001, **131**: 16.
[69] Rosenfeld, L. 'Henry Bence Jones (1813-1873): The Best "Chemical Doctor" in London"', in *Clinical Chemistry*, Vol. 33, no. 9, 1987: 1687-1692.

Board of Health, suggested and approved the necessary alterations to no. 49, Great Ormond Street.'[70]

West's energetic campaign among the London medical profession soon bore results. An editorial in the *Lancet*, in March, 1850, stated that

'There is no class which has been more neglected in this great city than the children of the poor…. We hail with cordial satisfaction a project which has been set on foot for establishing a HOSPITAL FOR SICK CHILDREN [*original capitals*]….'[71]

The article justifies the project firstly by referring to the statistics of childhood mortality, claiming that the benefits of science and medicine had been chiefly felt by adults and pointing out that in the fifty years since the introduction of vaccination, child mortality had fallen by just 2%. It notes the range of children's hospitals to be found in cities across Europe and describes this as a 'painful contrast' with the situation in Britain. This last comment could well have come at the instigation of West himself, given his response to Hügel.

The appeal for support rapidly extended far beyond the prominent social figures who would come forward as patrons of the new hospital. In June, 1851, three months after the inaugural meeting of the hospital committee, Charles Dickens organised the production of a play by Bulwer-Lytton with a set designed by Joseph Paxton, architect of the Crystal Palace which was that year's sensation, and featuring a cast which included the novelist, Wilkie Collins, and the illustrator, John Tenniel. The production achieved its goal of attracting publicity for the new venture and received favourable comment from Queen Victoria.[72]

When an account of the first public meeting to discuss the new venture was printed in the *Times* of the 22nd February, 1850, the news had come as a shock to the Committee

[70] Kosky, J. & Lunnon, R.J. *Great Ormond Street and the Story of Medicine.* (London: The Hospitals for Sick Children, 1991).
[71] *Lancet*, 30th March, 1850: 388-9.
[72] Telfer, K. *Great Ormond Street Hospital.* (London: Simon and Schuster, 2008): 20.

at Waterloo Road. They then launched a belated appeal for funds with which to open in-patient beds, but were too late, since the goodwill had passed to what would become the Great Ormond Street project. In 1856 the Royal Infirmary for Children and Women received a bequest which required it to open 16 beds, but it retained its older, narrower vision, concentrating on the provision of medical and surgical care for sick, poor children rather than engaging in research or teaching. The episode of West's departure, his meeting with Bence Jones, and the consequences for both institutions underlines the important contribution which was made by individual personalities. Had the Board at Waterloo Road been a little more active then they might have gained the credit for establishing Britain's first true sick children's hospital; had West been less experienced and less determined, Great Ormond Street Hospital might have been just one more charitable institution; and had it not been for Bence Jones, GOSH might never have been founded at all.

4.4 Founding a hospital

At the time that these discussions were taking place, much thought was being given to the question of just what purpose the new hospital should serve, and in particular the sort of cases it should treat. There is plenty of evidence that children needing treatment for surgical conditions and trauma were already being treated in existing hospitals. To take three examples which were reported or commented upon in 1846: a Dr. O'Ferrall is recorded as having written to the *Dublin Hospital Gazette* in 1845 about the management of fractures in children;[73] there is a report from the Sussex County Hospital, in Brighton, of a lithotomy which was carried out on a five-year-old girl;[74] and a report from Dublin gives technical accounts of surgery for imperforate anus and hare lip, a report which showed extensive knowledge of practice in France and Germany.[75]

[73] Cited in the *Lancet*, 17th January, 1846.
[74] *Lancet,* 4th July, 1846: 32.
[75] *Dublin Quarterly Journal of Medical Science,* vol. 1: 542-6.

Evidence that children were not completely neglected by adult hospitals comes too from a report in the *Lancet* which was written by Thomas Weedon Cooke, Medical Officer for the Diseases of Children at the Royal Free Hospital. Commenting about an aspect of the treatment of problems of the ear, nose, and vagina following diseases of childhood, Cooke observed that '…this…should ever be the case if the child has the opportunity of obtaining – and who has not? – surgical aid.'[76] Cooke's very job title is indicative of the provision that was made in this area, as is his assumption that surgery was routinely available for children. West had no wish to duplicate provision which was to be found elsewhere, and for this reason his intention was that no surgeon be appointed to the new hospital and cases of accidental injury would not be admitted. In fact, as late as 1952, when a history of the hospital was published to celebrate its centenary, there was still no proper casualty department.[77] On the other hand, the growth in interest in researching children's medical conditions did produce some responses from surgeons. A report from the Surrey Dispensary, dated February 1851, concerned the surgical treatment of an anal fistula in a 3½-year-old child. Forster, the surgeon, noted that surgery in children is sufficiently distinct from that of adults to warrant 'the special attention of an experienced surgeon,' and he asked: 'Could not certain rules be laid down for the treatment of infantile surgical ailments, as has been done with the medical affections of the same class of patients?'[78] In other words, the great effort over the past decade had been to secure recognition of, and action to remedy, the deficiencies in knowledge about the medical conditions affecting children. There had been an assumption that surgery presented no problems meriting such attention. However, now that the focus on child medicine was reaching the point of gaining its first dedicated institution, the surgeons were feeling left behind.

Some observers maintained that there was still a long way to go in rectifying the deficiencies in physicians' knowledge. The *Lancet* commented on this in 1847,

[76] Cooke, T.W. 'On Some Distressing Sequelae of the Diseases of Infancy', in *The Lancet*, 13th July, 1850: 45.
[77] Higgins, *Great Ormond Street*.
[78] *Lancet*, 22nd February, 1851: 204.

complaining that 'scanty physiology and pathology, decked out in respectable Latin, will stand higher than mere professional excellence'. Launching a scathing attack on the gulf that lay between physicians and surgeons it went on to say:

> 'The Royal Colleges have discovered the most extraordinary ground for creating a professional distinction that ever entered the mind of man. With them, the chief qualification for eminence in the healing art is ignorance of one or other half of it. A physician need not know much of physic; an entire ignorance of surgery will be sufficient to give him a respectable standing; a surgeon need not possess any real knowledge of surgery, but…if he does not know gout from measles – that will render him 'pure' and make him eligible to receive the highest appointments.'[79]

The campaign continued. Despite Forster's comment, it was widely believed that performing surgery on children was very little different from performing it on adults, and that no special body of knowledge was required. A new French text was applauded for combining consideration of both the medicine and surgery of children,[80] but nevertheless it was felt widely that the important gaps lay in knowledge of the medical management of children; the new hospitals would potentially be the province of physicians rather than surgeons. The meeting which took place on the 30th January, 1850 set out three aims for the new institution:

- The medical treatment of children of the poor during sickness, and provision of advice to mothers of children who could not be admitted
- The study of children's diseases and the teaching of medical students
- The establishment of a school which would teach women how to bring up healthy infants and children[81]

[79] Cited in Dally, A. *Women Under the Knife: A history of surgery.* (London: Hutchison Radius, 1991): 54.
[80] 'Report on the retention and extravasation of urine in a child of 20 months'.
[81] Higgins, *Great Ormond Street.*

The first of these aims is entirely traditional in as much as it is directly concerned with therapeutic intervention; however, it excludes all mention of surgery. The second mirrors to some extent one of the goals which was set by Bunnell Davis, but never carried out. The third would have been familiar to anyone with experience of Continental practice, similar provision being made, for example, by Mauthner in Vienna,[82] but it was new to Britain. The first report from the children's hospital at the Amalienstift, a Hamburg charity, had expressed a similar hope that the creation of children's hospitals might enable parents to become better educated in child-rearing and household management. It stressed the importance of domestic hygiene and hoped that parents' behaviour might be influenced by seeing the treatment their children received in hospital, and it claimed that improvements in child health would reduce adult levels of ill-health, incapacity, and poverty, all of which served to demoralise the lower classes. It summarised its message by asserting that the hospital served a higher purpose than simply treating individual cases of disease;[83] this sentiment was very much in accordance with the aims of the founders of GOSH.

These aims demonstrate a clear departure from earlier voluntary hospitals, combining as they do medical (but not surgical) treatment, research, teaching, and an educational function. On the other hand, further restrictions were specified: children with smallpox would be turned away, and children under two years were specifically excluded because it was felt undesirable to separate them from their mothers, although they could be treated as out-patients.[84] The intention was to create an institution with very clearly-focused aims and very different from the Continental ones, most of which, as Hügel shows, operated broad admissions criteria, with more concern to ensure that the children's parents were genuinely poor than to screen out particular types of disease. To this extent, at least, GOSH was following in the path of British voluntary hospitals,

[82] Hügel, *Beschreibung sämmtlicher Kinderheilanstalten:* 263, 267-9.
[83] *Erster Bericht über das Kinderhospital in St. Georg [First report about the Children's Hospital at St. Georg].* (pamphlet) (Hamburg, 1846).
[84] Lomax, E. 'The Control of Contagious Disease in Nineteenth-Century British Paediatric Hospitals.' *Social History of Medicine*, **7** (3) (1994): 386.

almost all of which specified very clearly the type of patients who would be refused admission, partly on medical grounds (or at least because of the harm which could be done to the hospital's reputation if it attempted to treat intractable conditions) but also because of the desire to limit charitable support to those who were judged to merit it. There is no discussion in Hügel of the possibility that relief of poverty might undermine the self-reliance of the beneficiaries.

The *Lancet* editorial which celebrated the plan to open a hospital for sick children set out the author's expectations about the physical arrangements at the new institution. It would be 'sufficiently remote from the metropolis to ensure to the inmates of the building the advantages of pure air and good ventilation.[85] It would have a garden or playground and, despite the reservations which had been expressed about the admission of children with smallpox, a separate building for children suffering from 'contagious fevers'. This is important, since one of the great objections to admitting children to hospital was fear of the rapid spread of infection, and indeed many hospitals specifically excluded the admission of children with infectious conditions. It is clear that not all infectious children would be excluded from this institution, although the issue remained controversial and in 1854 Bence Jones severed his connections with GOSH over his opposition to the admission of such patients.[86] With this in mind, the editorial acknowledged the high rate of mortality in the Paris hospitals but pointed out that this was not the case in Vienna, St. Petersburg, or Moscow.[87] Hügel had made a similar point, producing detailed statistics of mortality for most of the hospitals he surveyed; these typically ran at between five and fifteen per cent, which was a good deal less than that experienced in Paris.[88] Finally, the *Lancet* editorial pointed to the advantages that the existence of such an institution would bring: not only the immediate care which

[85] *Lancet*, 30th March, 1850: 388-9.
[86] Franklin, *Children's* Hospitals: 103-121.
[87] *Lancet*, 30th March, 1850: 388-9.
[88] Hügel, *Beschreibung sämmtlicher Kinderheilanstalten:*103;126;146;231

it would provide, but also 'the improvement of our knowledge of the pathology and treatment of a large and interesting class of diseases.'[89]

It is likely that West had a hand in writing the 1850 editorial since the record of a meeting held a year later, on the 18th March, 1851, in London's Hanover Square, shows the use of not similar but identical language in the resolution concerning the physical arrangements for the new hospital. It was explained that there was no specialist children's hospital anywhere in the Empire, and that very few children under ten years of age were admitted to general hospitals (despite the evidence of some medical literature from the 1840s). The figure of 136 admissions is given for the year 1843, although it is not explained why that particular year was chosen. Such hospitals were said to exist in 'every one of the large continental towns.'[90] The international comparison was compelling for several reasons. The frequent publication during the 1840s of reports from foreign hospitals and reviews of publications in journals including the *British and Foreign Medico-Chirurgical Review* had drawn to the attention of the medical profession the advanced work which was taking place abroad. It has been shown in Chapter Three that this work was looking increasingly convincing, objectors tending to fall back on arguments based on the notion that such ideas might be all right for foreigners, but they would never work in Britain. Another reason for such attention to be paid to the topic was West's embarrassment at having had to give such a weak reply to Hügel's enquiry.

National pride was certainly a factor in helping gather support for the new initiative; 1851 was also the year of the Great Exhibition in Hyde Park, and opinions were expressed by its planners and supporters which give a clear impression of the importance which was being placed on the ability of Britain to match or excel its Continental rivals across a range of endeavours. On the one hand, pains were taken to ensure that the organisation should be truly neutral, in order to give foreign

[89] *Lancet*, 30th March, 1850: 388-9.
[90] 'Proposed Hospital for Sick Children', in the *Lancet*, 22nd March, 1851.

exhibitors the greatest incentive to participate, but underneath lay a determination to show that the British could do it better and that, moreover, voluntary action worked more effectively than government intervention. This consideration was of great relevance to the discussions which were taking place around the organisation of health and welfare provision, and had been at the heart of the debates surrounding the passing of the 1848 Public Health Act. At a discussion of the exhibition's financial arrangements on the 17th October, 1849, the civil servant Henry Cole stated that

> 'I believe that no public works are ever executed by any foreign government which can vie for magnificence, completeness and perfection with those that our countrymen execute for themselves.'[91]

This statement also reflected elements of the attitudes which had emerged over the debate between proponents of the 'old' and the 'new' medicine; there was a lingering suspicion of the 'rational' Continental approach in favour of what was seen as a more individualistic (or empirical, or simply *ad hoc*) English tradition.

The optimistic publicity which surrounded the project for a children's hospital ran in marked contrast to what many medical men knew to be the case regarding a number of British medical practices when compared with those on the Continent. Chief among these were the shortcomings in the provision for the care for sick children, and these shortcomings were a recurrent theme in the demands for the creation of a children's hospital: this was, in some eyes, a matter of national prestige. Three years after the opening of GOSH, a review of recent publications on children's diseases applauded the progress that had been made, but noted that the French continued to be better supplied with such texts than the English and applauded 'such endeavours to elevate the department of medicine we are discussing to a position…equal to that it has long

[91] Quoted in Hobhouse, H. *The Crystal Palace and the Great Exhibition: art, science, and productive industry: a history of the Royal Commission for the Exhibition of 1851.*(London: Continuum, 2004): 13-14.

since maintained in the medical schools of the continent.'[92] It is as clear from this as from West's letter to Hügel that national pride was a powerful spur in securing the patronage necessary to enable the establishment of GOSH.

Contrary to one of the main objections to the establishment of children's hospitals, the 1851 meeting in Hanover Square asserted that the cost would be about ⅔ that of an adult hospital. It was envisaged that the hospital would house 100 beds. The meeting passed four resolutions:

1) That the hospital be 'a means of relieving the sufferings of the poor and of conferring important benefits on society at large'.

2) That there would be three specific aims:

- The provision of relief to the poor
- Promoting the advancement of medical knowledge
- Training women to be efficient children's nurses

3) That a temporary hospital be opened pending accumulation of sufficient funds to sustain the planned hospital. Dr. Burrows, one of the resolution's proposers, cited as an argument for rapid action the advantage which was to be gained from isolating individual cases of epidemic disease, this preventing its spread.

4) This laid out the rules by which the hospital would be governed and the powers of its officers. [93]

Possibly surprisingly at a meeting devoted to establishing a new voluntary hospital, and in contrast to Cole's observations about the merits of voluntary undertakings, Charles West concluded by mentioning the importance of government support for the children's hospitals in Paris and Vienna. In this respect, at least, he was a pragmatist rather than

[92] *Lancet*, 24th February, 1855: 218-9.
[93] *Lancet*, 22nd March, 1851: 331.

a purist. He pointed out that there were now seventeen such hospitals on the Continent, including two in Vienna, and expressed a hope that there would soon be more than one in London, a sentiment with which the *Lancet* agreed in its editorial comment.[94]

The first observation to make is that nowhere do these resolutions mention treating disease. Whilst undoubtedly such attempts would be made, this was not a promising source of public support at a time when the relevance and efficacy of current medical theories and the competence of physicians were facing such critical scrutiny. Instead, resolution 1 is expressed in terms of the wider social mission which a hospital might perform, and in particular, linked to the first part of resolution 2, proposes that it might provide relief to the poor. West subsequently wrote that the hospital had been founded not just to prevent children from dying, but because of the burden a sick child places upon its family when the working parents 'have no leisure to tend them'. He spoke of the 'strange gladness' which a mother feels at being relieved of this burden when her child dies.[95] This matter had been addressed from another perspective by the discussion of burial clubs in the reports of the Health of Towns commission [see chapter 3], and had been recognised in Germany as well:

> 'The comfortably-off can never understand how hard it is to have to work, care for healthy children, manage a household, and then care for a sick child…the provision of help [i.e. by a hospital] can relieve the pressing, helpless sorrow that such mothers face. Help will reduce the stress and increase families' strength to better their situation, which is the only permanent solution to poverty.'[96]

A brief announcement was made in the medical press that the new children's hospital in Great Ormond Street, London, would open on the 16th February, 1852.[97] A note

[94] *Lancet*, 22nd March, 1851: 340.
[95] West, *How to Nurse Sick Children*: 4.
[96] *Erster Bericht über das Kinderhospital in St. Georg.*
[97] *Medical Times & Gazette*, January-July, 1852: 177.

announced that the Queen had become a patroness and had donated 100 Guineas.[98] A subsequent editorial made the regular unflattering comparison with Continental practice, but then raised an unfamiliar objection to placing children in adult hospitals, it being that children there lacked stimulation and were required to keep unnaturally still.[99] This indicates a significant change of perspective: whereas previously the question had been addressed from the adult viewpoint, often in terms of the inconvenience and expense which the admission of children to hospital would bring, here is evidence of a child-centred consideration of the matter. This was, moreover, a viewpoint which Charles West shared – he saw disease as a moral problem, in that it deprived the patient of his loving innocence.[100] The editorial went on to note with some surprise the toys which were available, the pleasant surroundings, the Matron's 'sympathy for poor sick children', and the fact that the children were happy.[101]

The child-centred approach to nursing care was one which West endorsed strongly. He made it clear that 'grown people need amusement sometimes, and children, even when well, cannot always be reading wise and useful and instructive books....' After all, God created things which had no use other than to be beautiful.[102] Elsewhere he wrote that 'nothing is of greater moment than that a sick child should retain its fondness for its attendants during the whole period of its illness', and he gave this reason, among others, for rejecting treatment which involved the use of blistering and mustard poultices.[103] Indeed, shortly after the opening of Great Ormond Street Hospital, a correspondent noted that, in contrast with other hospitals, Great Ormond Street was light and airy and had a tableful of toys, which he suggested would do more good than

[98] *Medical Times & Gazette*, January-July, 1852: 507.
[99] *Medical Times and Gazette*, Volume 9, July-December 1854: 177.
[100] Boehm. "A Place for More than the Healing of Bodily Sickness": 158.
[101] *Medical Times & Gazette*, January-June, 1852: 523.
[102] West, *How to Nurse Sick Children*: 62-3.
[103] West, C. 'Clinical and Pathological Report of the Pneumonia of Children as it prevails among the Poor in London', in *Dublin Journal of Medical Science*, XXIII, 1843: 340-62.

pills. Fun and amusement were the guiding theme, and as a result the children were happy.[104] On the subject of the administration of medicines, West himself ordered that

> '...if after persevering trials you cannot succeed in administering what has been prescribed without fighting and struggling with the little one, it is better to desist from the attempt till the doctor's next visit....'[105]

This view contrasted markedly with the traditional approach, which was clearly articulated by Nightingale, whose attitude to children was, to say the least, practical rather than sentimental. She allowed that young children should be permitted to crawl and amuse themselves, and insisted that they should never be distracted when so occupied.[106] Her instrumental view of play, however, is demonstrated by her insistence that older children should be occupied just enough to promote recovery: 'Prizes and suchlike incentives may be given'.[107] She saw nursing as a generic skill, with no need for any allowance to be made in training nurses to care for children. Nightingale was both famous and a shrewd propagandist, and the renown of her nursing school came to overshadow alternative approaches in Britain.[108]

The GOSH founders' aim had been to work towards a total of 100 beds, but, as Mauthner had advised, to start with whatever funds would permit and then to expand as income increased. By January 1853, less than a year after it opened, the hospital had already added a further ten beds to its initial allocation of twelve, and more were

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[104] Editorial in *Medical Times and Gazette*, (January-July, 1852): 523.
[105] West, *How to Nurse Sick Children*: 54.
[106] Macdonald, L. (ed) *Florence Nightingale on Public Health Care.* (Waterloo, Ontario: Wilfrid Laurier University Press, 2004): 147.
[107] Nightingale, *Notes on Hospitals*: 129. The depth of the division of opinion and the lasting consequences of her belief in the generic nature of nursing were illustrated in the arrangements for the registration of nurses which became mandatory in 1919. The new Register was for nurses who had trained in general hospitals, and those who had worked solely in children's hospitals did not meet the necessary criteria for registration. They were listed on one of a number of supplementary registers, apparently to ensure that they would be prevented from caring for adults. Children's nursing remained very much on the profession's margins; in 1922, just as paediatric medicine was finding its way onto the medical curriculum [see Chapter Three] there were only 191 names on the supplementary register for children's nurses, against 10,887 on the general register. It was clear from the late 1850s onwards that if any special body of knowledge about the care of sick children were to develop and flourish, it would do so more readily in specialist institutions than in the hostile environment which was often to be found elsewhere.
[108] Glasper, E.A. & Charles-Edwards, I. 'The child first and always: the registered children's nurse over 150 years', Part 1, *Paediatric Nursing*, 14, (4): 38-42.

planned.[109] The report of the annual meeting of the GOSH charity, published in February 1853, stated that the beds had generally been full and that 'the addition of fever wards proved most beneficial.'[110] The report was also able to state that in the first ten months of its existence the hospital had treated 143 in-patients and 1,250 out-patients, and that it now had 30 in-patient beds.[111] This can be compared with the Royal Infirmary for Children, Waterloo Road which had treated 3,400 patients in a single month in the spring of 1852.[112] Whether this was because the Royal Infirmary took simpler cases, or simply had larger facilities, the implication is that GOSH was not attempting to improve the health of the mass of London's children by giving them individual therapeutic attention. Plenty of dispensaries existed to hand out medicines en masse, but GOSH existed to do something different. In the first place, in as far as it was treating children at all, it was doing so not by providing medicines but by offering respite from the conditions which had made them sick – an environmental rather than allopathic model of medicine. It was also providing experienced physicians with an opportunity to study the diseases of children on a systematic basis, and for students of medicine likewise to learn about them. Finally, and less successfully at this stage, it aspired to educate laypeople and professionals alike in techniques which would promote the prevention of disease.

An important piece of information was to emerge as time passed. One of the most powerful objections that has been noted to the creation of medical charities for children of the poor was the fear that to do so would encourage irresponsibility, as parents would bring in to the world more children than they could afford to keep, safe in the knowledge that if times became difficult then someone else would provide. By 1855 an examination of the statistics from GOSH showed that their patients were not generally from the poor or destitute classes, but were working people. This showed that, on the one hand, fears of undermining the independence of the very poorest families were

[109] *Lancet*, 8th January, 1853: 45.
[110] *Lancet*, 19th February, 1853: 191.
[111] *Medical Times & Gazette*, January-June, 1853: 335.
[112] *Lancet*, 15th May, 1852: 460.

unfounded, since these families were not using the hospital; on the other, it brought into question the effectiveness with which the hospital was pursuing its aim of contacting the most needy families in order to educate them in the raising of healthy children. Nearly all the patients had stable addresses, showing that they came from settled families rather than the poorest classes, whose living arrangements tended to be more transient.[113] In any event, the inference drawn from this information was that it removed the need to insist on letters of recommendation for admission, since this requirement put a burden on subscribers and was turning out to be an unnecessary precaution.[114] In its early days the hospital had difficulty in attracting enough patients to fill its beds, but subsequent investigations would confirm that many families who were using GOSH's services were far from being the needy ones for whom it had been intended, and in 1875 the Charity Organisation Society was asked to look at ways of restricting what were regarded as abuses.[115]

More information about the aims of the hospital's founders is given in a letter from H.A.Bathurst, Secretary of GOSH, and dated 12th April, 1860, in which Bathurst gave details of an appeal for funds. He praised the good progress that had been made, but regretted the fact that the hospital's work was still being carried out on 'too limited a scale to answer the objects contemplated by its Founders.'[116] The number of beds had risen to 44, but experience showed that 100 beds was the smallest number that would be 'efficient as a School of Medicine for the young Physician, and as a place of instruction for Pupil Nurses.' Bathurst was indicating that the hospital's teaching mission had not been forgotten, and indeed that it should help to determine the hospital's size. He also claimed that the size of the institution was inadequate to meet the needs of London's poor, underlining the hospital's public health rationale by stressing the need to provide children with some respite from the conditions which had

[113] Boehm, "A Place for More than the Healing of Bodily Sickness": 159.
[114] *Medical Times & Gazette*, July-December, 1855: 634-5.
[115] Lomax, *Small and Special*: 10.
[116] *Letter from H.A. Bathurst, Secretary to the Great Ormond Street Hospital,* held at the Great Ormond Street Hospital Archive.

made them sick: many children 'carry the seeds of serious and even of fatal disease' which might be

> 'eradicated by care and skill in the hospital, but which can scarcely even be checked when the little sufferer is carried back to its own close and comfortless abode, to endure, amid noise and neglect, all the grievous privations of poverty.'[117]

If Great Ormond Street Hospital was rooted in the new medicine of research, teaching, and public health, it will be seen in the next section that this was not always the case with the foundations that were to follow.

4.5 The Jenny Lind Hospital, Norwich

Whereas GOSH was established in response to new information and ideas about child health, the events which led to the foundation of a children's hospital in Norwich followed a much more traditional path, being the beneficiary of a rather unfocused charitable impulse. It could almost be said that the Jenny Lind Children's Hospital, Britain's second children's hospital, drifted into being. Evidence concerning its early years is limited: no significant institutional history has been published, and the two chief sources of information regarding its origins are a 30-page booklet published by the hospital itself[118] and an unpublished PhD thesis[119] whose author, Bruce Lindsay, has also written journal articles examining aspects of the hospital's history but not specifically considering its origins.[120]

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[117] *Letter from H.A. Bathurst.*
[118] Lindsay, B. *The Jenny*. (Norwich: Jenny Lind Hospital for Sick Children, 2004).
[119] Lindsay, B. *Who Cares? The Morphology of 'Caring' in Children's Hospitals, 1852-1950, with special reference to the Jenny Lind Hospital for Sick Children, Norwich.* (Norwich: University of East Anglia PhD Thesis, 2000).
[120] For example Lindsay, B. 'Pariahs or Partners? Welcome and Unwelcome Visitors in the Jenny Lind Hospital for Sick Children, 1900-1950', in Mooney, G. & Reinarz, J. (eds.) (2009) *Permeable Walls Historical — Perspectives on Hospital and Asylum Visiting.* Clio Medica/The Wellcome Series in the History of medicine:111-129; also Lindsay, B. '"A 2-year-old Goes to Hospital": a 50th anniversary reappraisal of the impact of James Robertson's film', in *Journal of Child Health Care* Vol 7 (1): 17-26.

In 1849 the Swedish soprano Jenny Lind gave two concerts in Norwich. It was reported that

> 'The two concerts at which Mademoiselle Lind assisted during the week in this city, produced the sum of £1,859. 1/-, and above £1,250 will remain for the charities when the expenses are paid…. It has been suggested that in each of the hospitals, to the benefit of which this benevolent lady has so eminently contributed, a "Lind Ward" should be established.'[121]

This represented a substantial sum; in the year 1852-1853, GOSH had received £293 in subscriptions and £4,221 in donations, sufficient not only to pay for its continuation but to permit its rapid growth.[122] In fact politicians and philanthropists in Norwich argued for four years as to what to do with the money, and the case provides examples of many of the vested interests which opposed the creation of children's hospitals.[123] The money was placed in the hands of the Bishop of Norwich, to be used for charitable purposes, but nothing was done until 1853, when a Mr. J.G. Johnson suggested using it to establish an Infirmary for Sick Children – this being a year after the opening of the hospital in Great Ormond Street and a time when there was much publicity surrounding GOSH's activities.[124] A public appeal was made for more funds, and the Bishop set out the arguments in its favour:

- the excessive proportion of infant mortality
- the special nature of the diseases to which children are liable
- the domestic circumstances under which sick children were currently cared for, often in ill-ventilated rooms in narrow courts, and under 'privation of every kind'

[121] 'Jenny Lind in Norwich', in the *Lancet*, 24th February, 1849: 192.
[122] *Lancet*, 19th February, 1853: 191.
[123] Lindsay, *Who Cares?*: 22.
[124] For example Dickens, C. 'Drooping Buds' in *Household Words*, April 1852.

- the fact that there were already children's hospitals in 'Vienna, Paris, most of the great towns of Christendom, and even Constantinople'[125]

The significance of this list is that the hospital was an initiative by lay people (in medical terms, at least), rather than being led by medical men, and the case put forward by the Bishop shows just how far the arguments which had been developing since the 1840s had entered the public consciousness by this time. Nevertheless, they focus on what might be described as the public side of a hospital's activities, which is to say the treatment of individual cases of disease and the relief of suffering.

The practical arrangements were suggested by Johnson, who proposed to link the new hospital to the existing lying-in charity, but Johnson warned that it would be necessary to win the support of the city's medical establishment, who would be suspicious of a lay initiative of this kind.[126] This followed events at the Norfolk and Norwich Hospital, where difficulties had arisen as a result of medical officers being excluded from the Board of Management. As a result, the charity was established on the 30th May, 1853, and the first Board of Management included the medical officers of the Norwich Lying-In Charity, whilst the Matron was also the Matron of the Lying-In Charity. There was strong opposition from local physicians and surgeons, who feared the competition which the new hospital would bring and who claimed that there was no need for a separate children's hospital since the Norwich and Norfolk Hospital already admitted children between the ages of six and twelve years, and others could receive treatment at the city's dispensary. The doctors also supported local residents who claimed that the admission of contagious children would put the health of the hospital's neighbours at risk.[127] Nevertheless, on the 31st December, 1853, the Committee of Management placed an advertisement in the *Norwich Mercury*, stating that the hospital would admit as in-patients 'children of both sexes, between the ages of two and ten years, suffering from any disease not contagious or infectious', and in addition would accept children

[125] *Lancet*, 18th June, 1853: 566.
[126] *Lancet*, 7th May, 1853: 431.
[127] Lindsay, *Who Cares?*: 97.

from birth to twelve years as outpatients. Any child found to be infectious after admission would be isolated.[128] There was no reference in this advertisement to any link with the lying-in charity.

Permission was given by the General Board of Health on the 6th February, 1854, subject only to the stipulation that the number of beds offered be reduced from seventy to twenty, although they did require that this total should include seven fever beds "for the reception of patients afflicted with contagious or infectious diseases or disorders...."[129] Signatories from the Board included Lord Shaftesbury, Edwin Chadwick, and T. Southwood Smith. As it turned out, the number of beds was reduced to twelve because of financial restrictions, and it was agreed that they would not after all accept infectious or contagious patients. Despite its founders' intention that it should treat medical patients only, it soon developed a surgical department.

The Jenny Lind Hospital, then, was a lay initiative with no precursor institutions such as a dispensary. Indeed, the Norwich Dispensary was one of its greatest opponents. While the arguments deployed in its favour demonstrate a familiarity with some of the arguments which were being made for the creation of such hospitals, they reflect lay preoccupations with poverty, status (the comparison with other European cities and with Constantinople), and above all with the treatment of individual patients, in contrast with the wider-reaching programme of GOSH. There is no sense of any understanding of the more technical issues which West had pursued, such as research and medical education, nor of the broader public health case for educating parents. The creators of this charity were imitators within their own limited conceptual framework, rather than pioneers. Each of the next four children's hospitals to open after the JLI would be shaped by dominant medical men, and the differing views of these men were reflected in differences between the hospitals' aims.

[128] Lindsay, *Who Cares?*: 102.
[129] Lindsay, *Who Cares?*: 104.

4.6 Conclusions

If it was well-established by the 1840s that child mortality was unnecessarily high, it was not immediately apparent what contribution children's hospitals might make to remedying this. The case began in some ways with physicians. As they began to turn their attention towards the health of young children they started to understand the extent of their ignorance about the diseases of childhood, and to demand opportunities to study them. A children's hospital would provide the opportunity for studying sick children systematically and for passing on the newly-acquired knowledge to the next generation of physicians.

The arguments were marshalled more systematically by Charles West, who was well-informed of the state of affairs on the Continent in this regard and ashamed of Britain's relative backwardness. West illustrates the part played by the desire for civic or national prestige, as well: repeated comments are found in the medical press and elsewhere as to the need to show that the British must not be outshone by the Continentals, and the example of the Jenny Lind Infirmary suggests as much a desire for a civic ornament as any real understanding of what a children's hospital might achieve.

West made effective (and selective) use of statistical information gathered from home and abroad to support a detailed case, anticipating the kinds of argument which had been made against such institutions in the past, while at the same time appealing to his audience's sentimental side. One new perspective which can be seen is that of the child as an individual; West's model of care made a case for children's hospitals on the grounds that young children are not the same as adults, and have needs, particularly emotional needs, which must be satisfied in distinctive ways. This must be done in distinctive institutions. This view of the child as qualitatively different is one which would be expressed repeatedly by advocates of children's hospitals.

The social case for hospital care for sick children was made powerfully by West, when he spoke of the burden which caring for a sick child places upon its family, and he recognised that the cure would only be lasting if the circumstances which had led to the child's falling sick could be altered; the part the hospital could play in this was by educating those who had care of children on an everyday basis.

If GOSH provides an example of a structured case for children's hospitals, the best that can be said for the JLI is that is provides a reasonably comprehensive list of the arguments which were made against. This appears to have been an opportunistic initiative which might just as well have turned out as an orphanage or a set of almshouses had the prevailing fashion been different. Nevertheless, the list of objections which were raised makes clear the need for men like West to prepare the ground very carefully with education and campaigning, since the support of neither public nor professionals could be taken for granted. Chapter six will show that this problem would recur in Edinburgh.

5 Foreign Inspiration: The Manchester Hospital and Dispensary for Sick Children and the Cheetham Hill Road Clinical Hospital and Dispensary for Children, Manchester

5.1 Introduction

Developments in Manchester in the mid-1850s, with not one but two hospitals opening specifically for children, provide a useful comparison of different conceptions of what a children's hospital might be, all the more so for their apparent (in certain respects) similarities. Section 5.2 looks at the predecessor institution, St. Mary's Hospital; its failure to cater satisfactorily for what doctors and parents perceived to be the needs of sick children helps illustrate the argument against treating children alongside adults in non-specialist institutions.

This is followed by an account of the work of Franz Hügel, an Austrian doctor who, in 1848, published an analytical survey of every children's hospital in Europe, not only informing the work of campaigners such as Charles West but illustrating the differing contexts from which August Schoepf Merei and Louis Borchardt emerged on their way to Manchester. Schoepf Merei worked with a Lancashire Doctor named James Whitehead to found the Cheetham Hill Road Clinical Hospital and Dispensary for Children in 1856, and section 5.4 compares their emphasis on research and the dissemination of knowledge with the same tendencies found in children's hospitals in the Austrian Empire, from which Schoepf Merei had emigrated.

The Manchester Hospital and Dispensary for Sick Children, on the other hand, opened its first in-patient beds in 1854 and was closely associated with the German émigré Louis Borchardt. Section 5.5 shows that it was clearly inspired by models found in Borchardt's native North Germany. This hospital, whilst actively supported by Manchester's German community, followed very much in the tradition of voluntary hospitals at home and abroad, in as much as it concentrated on the treatment of sick

patients, an approach which was by no means the priority of some of its contemporaries.

The Manchester case casts light on the question as to whether the new British children's hospitals were a continuation of a tradition which had long been developing in Britain, or were influenced by developments on the Continent, or whether they perhaps represented an attempt to create something altogether different. Whilst Pickstone dwells more on the parallels between the two institutions than on their differences, it will be shown that they represented two quite different visions of what a children's hospital might be, the Manchester Hospital and Dispensary being part of a long tradition whilst the Cheetham Hill Road Hospital could be seen as representing what the *Lancet* had described as the 'young medicine'.[1]

5.2 The Manchester Context: St. Mary's Hospital

This section is a brief overview based on secondary sources, and is intended to provide some context against which to view the two specialist hospitals which subsequently opened. Following a meeting in August, 1790, in 1791 a group of Manchester physicians including Charles White, a noted authority on pregnancy and childbirth, had leased a house with the intention of establishing a lying-in hospital which would also support women who were lying-in at home. The out-patient service would treat women at any stage of pregnancy, as well as women suffering from disorders consequent on childbirth, and children under the age of two years.[2] Children of this age were generally treated alongside their mothers because of the practicalities of feeding and caring for them. For this reason many children's hospitals would later impose a lower as well as an upper age limit on admissions.

[1] Editorial in the *Lancet*, 28th January,1854: 103-4.
[2] Young, J.H. *St. Mary's Hospitals, Manchester,1790-1963.* (Edinburgh & London: E. & S. Livingstone, 1964): 1-10.

To some extent St Mary's was always a hospital in search of a mission, and could be taken as an example of an institution lacking in strong leadership. It has been shown in Chapter Four that the children's dispensaries at Red Lion Square and Waterloo Road both lost impetus with the deaths of their founders, Red Lion Square closing altogether. Another comparison has been made between the hospital at Great Ormond Street, which was driven by the clear vision of Charles West and whose example was followed by many other institutions, and the Jenny Lind Infirmary, which came into being almost by accident and remained no more than a local charity. From its founding until the 1850s, St. Mary's can be seen to be lacking a clear sense of direction, instead simply responding to a series of events not of its own making.

Following a financial crisis in 1813 it ceased admitting in-patients, and did not do so again until the 1850s.[3] In 1822 it changed its name to the 'Lying-in Hospital and Dispensary for Diseases of Women and Children', and prepared to admit children up to seven years of age, but this decision appears to have been the result of a search for new sources of patients rather than any specific dedication to the health of young children.[4] It is not clear whether any children in the age group 2-7 years were in fact admitted, but the lack of commitment to this course of action is in any case evident, for in 1828 an internal report called attention to the rule which specified that only children under two years old should be treated and the former policy was reinstated.[5] In 1853 the financial position had improved sufficiently for it to resume admitting in-patients,[6] and in 1854 it changed its name to 'St. Mary's Hospital and Dispensary for the Diseases peculiar to Women and also for the Diseases of Children under Six Years of Age.'[7] This was essentially a refounding, which followed a period of crisis, including a devastating fire and a move to newly-built premises which now had to be justified. For much of its history St. Mary's Hospital lacked strong leadership, and so while individual

[3] Young, *St. Mary's Hospitals*: 21.
[4] Young, *St. Mary's Hospitals*: 31.
[5] Bride, J.W. *A Short History of St. Mary's Hospitals Manchester and the honorary medical staff: from the foundation in 1790 to 1922.* (Manchester: Sherratt and Hughes, 1922): 18.
[6] Bride, *Short History*: 26.
[7] Young, *St. Mary's Hospitals*: 40.

physicians showed an interest in children's diseases there was no institutional support for transforming this interest into a core part of the hospital's activities.

In the first half of the nineteenth century three Manchester medical men stand out as having shown any clinical interest in the health of children. Two illustrate the way in which the health of children was seen more as a sideline rather than a specialism. The first, Thomas Radford, Surgeon Extraordinary, Consulting Surgeon, and Physician to St. Mary's Hospital after 1818, gave a series of lectures on the diseases of women and children to the Manchester Medical Institute in 1827, lectures which were subsequently published, and he also lectured on the same subject at the hospital itself in 1832.[8] His interest in the topic reflects the link which was commonly made between women's and children's health at this time, and there are no indications that he pursued child health as a discipline in its own right. The second was Charles Clay, surgeon-in-ordinary at St. Mary's in 1857-8. Clay lectured on midwifery and the diseases of children, but his publications dealt with matters of obstetrics and gynaecology.[9]

A different case altogether was James Whitehead, surgeon to the hospital from 1842-1856, at a time when his interest in the diseases of women and children was at its peak.[10] A comparison might be drawn with the career of Charles West, who after many years at the Waterloo Road Dispensary could be said to have outgrown the institution, his interest in providing more specialised facilities specifically for children having failed to gain the support of the hospital's trustees. Whitehead, likewise, would eventually leave his hospital and co-found a new one in order to pursue this new speciality effectively.

When Schoepf Merei and Whitehead made their proposal for a clinical hospital for the study of the diseases of children, St. Mary's staff were forbidden to have anything to do with it. The lack of commitment to the care of children at the hospital was shown by the

[8] Bride, *A Short History*: 75-79.
[9] Bride, *A Short History*: 88-90.
[10] Bride, *A Short History*: 87.

resignation of five surgeons in 1857, in part because of proposals for the admission of children as out-patients who might require home visiting over what the surgeons felt to be an inconveniently wide area. At this time the hospital had 30 beds for children, but was finding trouble filling them.[11] This was in marked contrast to the experience of other children's hospitals of this period, where the story is time and again one of rapid expansion. In 1859 the hospital went to the lengths of abolishing the requirement for in-patients to be recommended by a subscriber and then advertising for patients in the local press. In 1866 there was a proposal to amalgamate with the Manchester Children's Hospital but this came to nothing, and in the 1870s and 1880s it was often the case that half the beds were empty.[12]

As had been found in Germany, divided priorities had limited the hospital's effectiveness in providing satisfactory care for children. A reviewer in the *Edinburgh Medical Journal* wrote 1858 that '…the business and mechanisms of a Children's hospital…have been found too little in harmony with a general institution, to render their union easily compatible…and hence it is that the experiment…has neither conferred equal benefits, nor borne the like scientific fruits.'[13] The reviewer was describing an attempt at treating children within general hospitals, but his account forms an effective description of developments at St. Mary's Hospital. This supported the objection which had been raised by advocates of children's hospitals to those who suggested building children's wards within general hospitals, or even nursing children on adult wards.

[11] Young, *St. Mary's Hospitals*: 47-51.
[12] Young, *St. Mary's Hospitals*: 51-62.
[13] Review in *Edinburgh Medical Journal*, vol. 3, July 1857-June, 1858: 818.

5.3 Hügel's survey of European children's hospitals

The German experience referred to here is instructive. In 1848 the Austrian doctor, Franz Hügel, published a survey of every children's hospital in Europe.[14] Hügel had founded a children's hospital of his own and had noted the absence of any published surveys from which it was possible to gain a view of the progress which was being made in the development of children's hospitals, either individually or collectively. He believed that by examining the advantages and problems of running such hospitals it would be possible to do several things: firstly, to make recommendations as to how existing institutions might be improved; secondly, to encourage further foundations to be made, and to provide a useful guide for anyone wishing to do so; and, finally, to arrive at more general rules about how such establishments might best be operated. He noted the fragmentary nature of existing reporting and the great physical distances between the various institutions and hoped that by describing them systematically it might be possible for those who ran them, and for anybody else who might be thinking of opening such a hospital, to draw on the best examples of practice which were available. In his introduction he stressed that this was a work of description, not comparison or polemic, and expressed respect for the work done by the many children's doctors across Europe.[15] The book treads a fine line, since while the descriptions of institutions are judgement-free, several hundred pages are then devoted to suggesting how an ideal children's hospital might be run. Readers are left to draw their own conclusions. Hügel placed considerable emphasis on the physical layout and administrative arrangements of the hospitals, praising those with purpose-built accommodation and going into some detail about the volume of air allocated to

[14] Hügel, F.S. *Beschreibung sämmtlicher Kinderheilanstalten in Europa: nebst einer Anleitung zur zweckmässigen Organisation von Kinder-Krankeninstituten und Kinderspitälern, mit Beiträgern zur Geschichte und Reform sämmtlicher Spitäler im Allgemeinen.* (Vienna: Kaulfuss Witwe, Prandel & Comp., 1848).
[15] Hügel, *Beschreibung sämmtlicher Kinderheilanstalten*: 7-8.

each patient in the wards.[16] The early British children's hospitals, converted from dwelling-houses, would not have fared well by Hügel's standards.

The majority of the institutions described were in the north German states (both in Prussia and elsewhere) and the Austrian Empire, although examples from Russia, France, Italy, and Constantinople were also considered. In all, Hügel described twenty hospitals which were dedicated solely to the treatment of sick children, as well as a number where sick children formed a part of their intake, plus seven dispensaries, a foundling hospital, and a crèche. In each case he considered among other things the circumstances of the institution's foundation and the aims of its founders. Many foundations were associated with broader projects to relieve the effects of poverty, and in the great majority of cases the primary goal was to provide medical treatment for sick children of poor parents, and little else besides. There were, however, some exceptions, institutions where the founders had shown an interest in the education of doctors and also of children's nurses, both clinical and domestic. In addition, there were examples of hospital directors who published their findings and gave lectures. What is striking is that almost all of the institutions which demonstrated some interest in research and teaching were in the Austrian Empire: out of eight hospitals described there, four fitted this description. These included: the *Wiener Kinderspital*, subsequently known as the *Kaiserin Anna-Maria Kinderspital*, which was founded by Ludwig Mauthner in 1837; the *Pesther Kinderspital*, founded in 1839 by the same August Schoepf Merei who would later work in Manchester; the *Allgemein unentgeldliche Kinderspital zum heiligen Joseph in Verbindung mit Dr. Bielerschen Kindsfrauenbildungs-Anstalt*, founded in the Vienna suburb of Wieden in 1842 [referred to here as the Wieden hospital]; and the *Kinderhospital des heiligen Lazarus*, in Prague, established in 1842 and refounded in 1844 after its instigator was incapacitated by illness.

[16] Hügel, *Beschreibung sämmtlicher Kinderheilanstalten*, ch.2: 28-305.

Mauthner was a former regimental doctor who had been inspired to open a hospital for poor children after caring for the sick daughter of one of his soldiers. His first premises were his own house, where he began with six beds. He soon attracted royal patronage (hence the hospital's change of name) and the institution became firmly established. Mauthner had a clear interest in teaching and research, having already been a lecturer in child health care and, from 1850, a full professor, fulfilling (or possibly inspiring) an aim which appears to have been more common among physicians working in children's hospitals in Austria than was the case in North Germany; the significance of this difference will become apparent in the comparison of the two Manchester hospitals. Mauthner travelled throughout Europe, Egypt, and the Near East in pursuit of his research, and published extensively,[17] gaining international recognition for his work on topics ranging from children's nutrition, through the diseases of the brain and spinal cord in children, to the uses of cold-water therapy.[18] It is suggested by Oehme that it is largely as a result of Mauthner's combination of pioneering clinical and academic work that paediatrics developed into an independent discipline in Austria before it did so in Germany and elsewhere, and this would explain the preponderance of Austrian hospitals among those with an academic orientation.[19]

August Schoepf Merei was born in Hungary in 1804, and by 1836 he was Professor of the History of Medicine at Pesth University. He founded an orthopaedic institute that same year, and in 1839 he established the *Pesther Kinderspital*,[20] which by 1846 was recognised as a university clinic, although Schoepf Merei himself had been delivering regular clinical courses for some years.[21] His work was, however, interrupted by the abortive revolution of 1848. His role in these events is not entirely clear: Hügel states that he did his best to calm excitable elements among his staff, whereas Wurzbach

[17] Wurzbach, C. von, *Biographisches Lexikon des Kaiserthums Österreich* (Vienna: k-k Hof- und Staatsdrückerei, 1876), v17: 156-7.
[18] For example *Monthly Journal of Medicine*, vol XX, Jan-June, 1855: 257-8, and the *Dublin Quarterly Journal of Medical Science* XIX, 1855.
[19] Oehme, J. *Pioniere der Kinderheilkunde*. (Lübeck: Hansisches Verlagskontor, 1993): 61.
[20] Wurzbach, *Biographisches Lexicon,* v31: 178.
[21] Hügel, *Beschreibung sämmtlicher Kinderheilanstalten*: 145.

(editor of the Imperial Austrian equivalent of the *Dictionary of National Biography*) suggests that he was more directly involved. The result was, in any case, that he had to flee the Empire and eventually, in 1850, arrived in Manchester.

The Wieden hospital was an extension of an existing institution, a *Kinderbewahranstalt,* which existed to provide day care for the children of poor mothers in order to enable the mothers to find paid employment. These day-care settings or crèches were common in parts of Germany until, following the opening of Fröbel's first *Kinder-Garten* [*sic*], there was a strengthening of links between childcare and education.[22] The hospital opened in 1842, primarily for the benefit of the children at the children's centre, and in 1844 an associated institute was opened to train children's nurses of both the domestic and hospital variety. Training was provided in the care of babies from birth to one year, healthy children from the first to sixth year of life, and also sick and convalescent children. Here is the clearest indication from the Continent of a public health approach to the issue, aimed at keeping children healthy though educating parents and carers in child-rearing, as well as treating the children when they fell sick. There were none of the reservations which were being voiced in England about the possibility of making children too comfortable; the expressed aim was that patients should expect to enjoy all the comforts and facilities which might be experienced in a bourgeois family.[23]

Prague's children's hospital was founded by Dr Emil Kratzmann but his work was quickly taken over by Dr Joseph Wilhelm Löschner, who was already a lecturer in medicine. Löschner insisted that assistants' posts be limited to a term of one year in order to spread the opportunities for gaining experience of working with sick children as widely as possible, clearly seeing the establishment as a teaching hospital. He also developed firm views as to how to care for sick children and their parents, and ensured that his methods were followed by both medical and nursing staff. Like Charles West,

[22] Reyer, J. 'Geschichte frühpädagogische Institutionen' in Fried, L. & Roux, S. (eds) *Pädagogic der frühen Kindheit.* (Weinheim: Beltz, 2006): 268.
[23] Hügel, *Beschreibung sämmtlicher Kinderheilanstalten*: 284-290.

he insisted that children be treated as individuals and that nurses manage them as though they were their own children and deal lovingly with their changes of mood. He went further than West, however, in his emphasis on the needs of parents and the duty of nurses to care for them as well.[24]

On the question of the academic orientation of many of the physicians who were involved in the running of Continental children's hospitals, and the contrast with British practice, Schoepf Merei himself observed that

> 'There is in this country [England] little excitement for the mind, imagination, and senses, in comparison with the Continent. Scientific professions in Britain receive comparatively little support or encouragement, and seldom reward from the state; and their public position is altogether not nearly so attractive as in Germany and France. To this general rule the medical profession, in spite of its practical importance to humanity, forms no exception.'[25]

For all that Schoepf Merei generalised about Continental practice, not everywhere reflected his experience in Austria-Hungary. The German states outside the Empire tended to approach the matter from a different perspective, that of charitable help for the poor by treating, caring for, and feeding their sick children. This approach accords more closely with Charles West's aim of relieving parents of the burden of caring for a sick child. West had studied in Bonn and Berlin, both within the Kingdom of Prussia.[26] Out of seven north German children's hospitals described by Hügel, only one, the *Kinder-Krankenhaus zu Frankfurt-am-Main*, included any sort of educational provision. It opened in 1843, having been funded by a bequest made by a noted local doctor in 1835. In order to allow young doctors the chance to continue their education, all doctors in Frankfurt who had been practising for fewer than four years were given

[24] Hügel, *Beschreibung sämmtlicher Kinderheilanstalten*: 184-205.
[25] Merei, A.S. *On the Disorders of Infantile Development and Rickets; Preceded by Observations on the Nature, Peculiar Influence and Modifying Agencies of Temperaments.* (Churchill: London, 1855): 92-3.
[26] 'Charles West, 1816-1898', in Matthew, H.C.G. & Harrison, B. (eds.) *Oxford Dictionary of National Biography*, (Oxford: OUP, 2004), Vol. 58: 216.

access to its clinics. Lectures were also given, although its regulations stated that the timing of these would be left to the discretion of the hospital doctor. There was apparently some research activity, as a Dr. Stiebel was appointed to oversee the hospital's scientific activities.[27] Unlike Vienna, Pesth, and Prague, Frankfurt was not at this time a university city, and this appointment was purely a hospital initiative.[28] More typical of German practice were hospitals such as the *Elisabeth-Kinder-Hospital* in Berlin, founded in 1843 by Stephan Barez, [29] a Professor of Medicine who helped to found the *Journal für Kinderkrankheiten* (Journal of Children's Diseases), also in 1843.[30] Despite Barez's academic credentials, the aims of the hospital were largely limited to the medical care of children of poor parents. Surgery was not completely precluded, but was confined to minor procedures. The hospital was linked to a *Kinderbewahranstalt*, and had been founded at the instigation of an organisation which represented 27 such children's centres. There was no dispensary or other out-patient provision. Hügel's description specifically states that no lectures were given and no scientific papers produced.

Barez was also involved in the creation of the *Louisenkinderheilanstalt*, likewise in Berlin, in 1844. This hospital was a doctors' initiative and might have provided Barez with an outlet for his academic energies, but it, too, was limited in its aims. It admitted only acute cases and carried out no surgery. There was a dispensary, and some home visiting was undertaken, but there was no resident doctor – the aim seems to have been the provision of straightforward and cost-effective medical care for children who were classified as being motherless, lacking proper motherly love, or having parents who were too sick or poor to care for them.[31]

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[27] Hügel, *Beschreibung sämmtlicher Kinderheilanstalten*: 60-75.
[28] Rüegg, W. 'Themes' in Rüegg, W. (ed.) *A History of the University in Europe. Vol. III, Universities in the Nineteenth and Early Twentieth Centuries (1800-1945).* (Cambridge: Cambridge University Press, 2004): 3-31.
[29] Hügel, *Beschreibung sämmtlicher Kinderheilanstalten:* 29-33.
[30] 'Vorwort' in *Journal für Kinderkrankheiten'* vol. 1, no. 1, no page number.
[31] Hügel, *Beschreibung sämmtlicher Kinderheilanstalten*: 35-9.

Somewhat like the *Elisabeth-Kinder-Hospital*, the *Kinderspital St. Georg* in Hamburg, founded in 1840, was attached to the *Amalienstifte*, a women's charity for the care of the poor and sick. It occupied two rooms in a building which was otherwise let to a number of poor families. The links to the charity limited the scope of the hospital's activities, since the foundation wanted to ensure that the hospital did not dominate or crowd out its other charitable activities.[32] Thus it can be seen that there was a tendency for German children's hospitals to be placed within the broader context of social action and poor relief, whereas in the Austrian Empire they were more likely to be seen as institutions in their own right, with a mission which went well beyond the day-to-day business of treating sick children. Vienna seems to have led the way in this respect: Mauthner had written in 1837 that 'neither in its inner life nor in its external manifestations is a child simply a small adult'.[33] Corzelius notes that this would be a 'core axiom' of the new hospitals, but that it would be a long time before it was accepted outside Vienna. This orientation might help to explain why the new approach spread within the Austrian empire more rapidly than within greater Germany.

5.4 Whitehead, Schoepf Merei, and the Cheetham Hill Road Clinical Hospital and Dispensary

It is in this context that it is possible to evaluate the contributions of Schoepf Merei and Borchardt to the creation of hospitals for sick children in Manchester. August Schoepf had enjoyed a distinguished academic career before his exile from Hungary: in addition to his gaining his professorship he had founded a medical journal in 1842 and produced annual reports from the children's hospital; he was a member of the city's medical faculty and a corresponding member of the Hungarian Academy of Sciences.

[32] Hügel, *Beschreibung sämmtlicher Kinderheilanstalten*: 84-9.
[33] Corzelius, T. *Private Kinderkrankenhäuser im deutschen Sprachgebiet (1837-1900).* (Cologne: Universität Köln, 1988).

He arrived in Manchester in 1850, where he settled under the name Merei.[34] At this time Manchester had a thriving German community which tended to be sympathetic towards the kind of liberal and reformist views which had led to Schoepf Merei's exile. Notable among the social reformers were the German Unitarian congregations, and there was a vigorous movement within this community which promoted pedagogic reform, emphasising the whole child and the balance that needed to be struck between mind and body.[35] Schoepf Merei developed a medical practice and gave lectures at the Chatham Street School of Medicine, his topics including children's diseases, and he published extensively. In 1856 he worked with James Whitehead to open a children's hospital, as a result of which he was invited to lecture in children's diseases in London.[36]

Whitehead had come from an altogether different medical tradition, but his subsequent career suggests ambitions similar in kind to those of Schoepf Merei. He was born in Oldham in 1812, his father a herbalist. As a child he worked in a cotton mill and subsequently went to Manchester to study at the Marsden Street School of Medicine. After two periods of apprenticeship he gained his Licentiate from the Society of ApothecAriès in 1834, followed by Membership of the Royal College of Surgeons in 1835, Fellowship of the Royal College of Surgeons in 1845, MD (St. Andrews) in 1850, and finally Membership of the Royal College of Physicians in 1859. In 1836 he visited Germany and France, spending two years in Paris, returning to Manchester in1838 to work as a general practitioner, and in 1842 he worked as a demonstrator at the Marsden Street School of Medicine.[37] In the breadth of his training and qualifications, Whitehead's career somewhat resembles that of Charles West, and makes a marked contrast with that of Alfred Stephens, founder of the Liverpool Infirmary for Children

[34] Wurzbach, *Biographisches Lexicon,* v31: 178.
[35] Westaway, J. 'The German Community in Manchester, Middle-Class Culture and the Development of Mountaineering in Britain, *c.* 1850–1914' in *The English Historical Review*, Volume CXXIV (2009), Issue 508: 571-604.
[36] Wurzbach, *Biographisches Lexicon,* v31: 179.
[37] 'James Whitehead (1812-1885)' in Matthew & Harrison, *Oxford DNB* Vol. 58: 664-5.

(see below). It also aligns well with the academic interests of Schoepf Merei and contrasts with the more pragmatic Borchardt.

Like Mauthner, Whitehead's interest in the hospital project was motivated by personal experience. In 1844, two years after their marriage, Whitehead's wife had died of puerperal peritonitis, and he resolved then to devote his career to working with the diseases of women and children. He subsequently lectured in obstetrics at the Royal School of Medicine as well as spending fifteen years as surgeon to St. Mary's Hospital for Women and Children, also in Manchester. Like Schoepf Merei, Whitehead published extensively.[38] He was familiar with Continental medical practices and in terms of both his sound academic grounding and his personal commitment to his chosen area of work, Whitehead formed a very good match for Schoepf Merei. It is not clear how they met, but they published their initial proposal within a year of Schoepf Merei's arrival in Manchester.[39]

In 1851, just as the work to open Great Ormond Street Hospital was receiving extensive publicity, Schoepf Merei and Whitehead circulated an eight-page pamphlet entitled *Suggestion for a Clinical Hospital for the Diseases of Children*. Inspired both by Hügel's 'very interesting treatise' and by the arguments put forward by the campaign for a children's hospital in London, they cited two principal motives for establishing children's hospitals: one was the 'appalling rate of mortality amongst the children of the poor' – 35% within the first two years, 50% within the first five; the other was the need to acquire and to pass on practical information about child health. It was 'deemed to be essentially important' that the hospital engage in research and regular publication not only regarding the diseases of children, but also concerning 'the sanitary state of localities and dwellings, and of the effects of habits and privation upon health.'[40]

[38] 'James Whitehead', *DNB*: 664-5.
[39] Whitehead, J. & Merei, A.S. *Suggestions for a Clinical Hospital for the Diseases of Children*. (Manchester: Bradshaw and Blacklock, 1851).
[40] Whitehead & Merei, *Suggestions for a Clinical* Hospital: 7.

The work of the hospital should include both lectures and clinical instruction for students and junior doctors, and should therefore be located close to the other hospitals and the medical schools. The instruction of parents was specifically included in the hospital's educational mission. Whilst acknowledging the emotional appeal of providing care for helpless children, the authors stressed that the provision of an institution which

> 'could afford instruction to the student in medicine, and furnish the necessary information to mothers and nurses, full of mischievous prejudices, must be a matter of the highest importance to all classes of the community.'[41]

This emphasis on the potential public health benefits which might be gained was developed in their proposed admissions policy. They were critical of existing children's hospitals which operated a minimum age for admission of two or three years and insisted that children be admitted 'from the earliest possible age, since it was in the first years of the child's life that it would benefit most from its mother being instructed in 'cleanliness, order,…suitable diet,…and to the moral management which it is the province of parents to exercise.'[42]

They experienced difficulties in raising finance until in 1853 the wealthy German Unitarian and philanthropist Salis Schwabe offered to manage that side of affairs. Unfortunately Schwabe died before he was able to achieve anything in this respect, and in the end Whitehead and Schoepf Merei funded the hospital's first two years of operation out of their own pockets. The hospital opened on a small scale at first, in 1856, and for out-patients only, being intended as an experiment which would expand in due course, and it soon attracted a substantial body of some twenty medical students, offering as it did opportunities for practical instruction which were lacking in

[41] Whitehead & Merei, *Suggestions for a Clinical Hospital*: 3.
[42] Whitehead & Merei, *Suggestions for a Clinical Hospital*: 4.

the medical schools, but it was far from clear at this stage what prospects the field offered for professional advancement.[43]

Its aims were clearly set out by Schoepf Merei in the first Annual Report, published in 1857, and show how successfully the aspirations set out in the 1851 pamphlet had been put into practice:

> 'The objects of this institute are the following - it being intended not more as a charity than as a clinical school for the department of medical science to which it is devoted:-
>
> 'To carry on scientific investigations into the causes, nature and treatment of Diseases of Children;
>
> 'To inquire into the causes and character of the principal infantile disease prevalent in Manchester, the progress of physical development in childhood, and the causes which hinder its due advancement; the different modes adopted among the poorer classes, of nursing, feeding and managing their children, with the development respectively on health and disease;
>
> 'To impart instruction to mothers and nurses and to spread sound principles on the subject of nursing and managing children amongst the lower ranks;
>
> 'To afford to students and young practitioners opportunities of acquiring practical knowledge in this branch of medicine, and to deliver periodically, for this purpose, Clinical lectures, illustrated with appropriate cases.'[44]

At no point do these aims mention the treatment of children, which was viewed as a means to an end rather than an end in itself, that end being to conduct research, to

[43] Chapter 2 'James Whitehead and the Clinical Hospital for the Diseases of Children', in Evans, M.L. *A History of the Clinical Hospital for the Diseases of Children (Manchester Northern Hospital) & its Founders, Drs. August Schöpf Merei & James Whitehead.* <http://www.goudges.com/mary/clinhosp/index.html> - accessed 22.03.2007.
[44] Review: 'First Report of the Clinical Hospital for Children's Diseases, Manchester', in *Glasgow Medical Journal*, Vol. V (No. 18, July 1857): 246-51.

disseminate its findings, and to teach, and in so doing to improve the general health of the child population. In these respects it was very different from a traditional dispensary even though at this stage it admitted no in-patients. The review went on to discuss the progress that had been made at the hospital in compiling some of the first growth and developmental norms to have a sound statistical basis. The reviewer cited experience in Glasgow as demonstrating that much ill-health in children was the result of poor housing, inadequate diet, 'heartless nursing', and drunkenness; in other words, that improving child health would need to be tackled by public health as much as by clinical methods.[45] Further evidence that Schoepf Merei and Whitehead were more interested in surveillance and education than in the sustained treatment of individual children lies in the fact that the Clinical Hospital did not open its first in-patient beds until 1867.[46]

Schoepf Merei and Whitehead were very much aware of the public health aspects of their work, discussing the effects of diet in particular on children's health. They were also insistent that children's health formed a separate medical discipline from those commonly studied, but that in order to flourish this discipline would need its own institutional structures, including children's hospitals, for 'only in such establishments can such investigations be carried on as will result in placing this branch of medical science on a level with other departments.'[47] Schoepf Merei wrote in 1855 that

> 'Among the objects of the medical practitioner it is one of no secondary importance to promote the normal development of the human body during the stages of its growth, and to regulate its functions in accordance with the various natural dispositions of the individuals. The purpose, in order to be satisfactorily realised,

[45] Review: 'First Report of the Clinical Hospital for Children's Diseases, Manchester', in *Glasgow Medical Journal*, Vol. V (No. 18, July 1857): 246-51.
[46] Pickstone, J.V. *Medicine and Industrial Society: A History of Hospital Development in Manchester and its Region, 1752-1946.* (Manchester: Manchester University Press, 1985).
[47] Review of Merei, A.L. and Whitehead, J. 'Children's Diseases (First Report of the Clinical Hospital, Manchester)', in *Dublin Quarterly Medical Review,* Vol. XXIII, 1856: 182-4.

requires enlightened views and notions on the principal agencies of life not only in the profession but in the public generally.'[48]

Schoepf Merei was articulating a broad vision of child health, rooted in the promotion of the development of healthy children within the community and with the treatment of sick children as a last resort.

The Clinical Hospital provided evidence of another kind, too. One of the great objections to the existence of children's hospitals had been that they encouraged immorality by absolving careless parents of their responsibilities. The author of the Glasgow review argued that not only was it wrong to make children suffer for their parents' shortcomings, but that the evidence from this hospital showed that the parents using it were generally caring and responsible, since only a small proportion of the children treated were illegitimate. He suggested that any argument against hospitals for children was also one against hospitals for adults.[49]

If the public health dimension of its activities represented a new departure for a British hospital (along with its near-contemporary at Great Ormond Street), the Clinical Hospital was equally committed to fulfilling the demands which had been made in the medical press for more research into the diseases of children. Whilst many institutional histories follow Hügel in stressing the philanthropic motives of the founders of children's hospitals, the work of Schoepf Merei and Whitehead suggests that other goals were equally important to them. As their published aims make clear, for them this hospital was a scientific and educational establishment – 'it being intended not more as a charity than as a clinical school for the department of medical science to which it is devoted' – in other words, while other hospitals might include research and teaching among their activities, here they were considered to be of primary importance. In his discussion of the development of the Prussian medical profession, Huerkamp links the creation of medical charities to the increasing interest in empirical approaches to

[48] Merei, *On the Disorders of Infantile Development and Rickets.*
[49] *Glasgow Medical Journal,* Vol. V: 250.

medical practice. In order to test therapeutic approaches and compile evidence, doctors needed experimental subjects. The normal relationship of a doctor with his wealthy patients was that of client (the physician) and patron (the patient), and the doctor's income depended on pleasing the patient and indulging their whims. In a charitable institution the power relationship was reversed; poor patients were dependent for their treatment on whatever care the institution chose to give them, and while many children's hospitals did focus on the provision of care, there was always the possibility for more enquiring doctors to use their patients as raw material for research.[50] This approach had been the explicit practice of Professor Osiander at the Göttingen University Lying-in Hospital from 1792-1822, who regarded his patients as 'living mannequins'.[51]

Even an out-patients' clinic could be used for research and teaching purposes. At the *Pesther Kinderspital* Schoepf had insisted that the ambulatorium (dispensary) come under his direction in his capacity as lecturer and that accurate records be kept in a standardised format, just as in the in-patients' department.[52] His research goals there included the development of an objective method for assessing and classifying symptoms and the further investigation of pathological anatomy. He conducted controlled experiments by allowing some conditions to take their natural courses and comparing them with similar cases which had been treated with medication.[53] It is highly questionable whether paying parents would have allowed their children to be used as trial subjects in this way. In a similar fashion, the *Hôpital des Enfans Malades* in Paris carried out post-mortem examinations on all of its patients who died, as a matter of routine.[54] A number of Continental hospitals described by Hügel wrote in their regulations that this should be a condition of a patient's admission. Seen from this

[50] Huerkamp, C. *Der Aufstieg der Ärzte im 19. Jahrhundert: vom gelehrten Stand zum professionellen Experten; das Beispiel Preußens.* (Göttingen: Vanderhoek & Ruprecht, 1985): 41.
[51] Schlumbohm, J. 'The Pregnant Women are here for the Sake of the Teaching Institution: The Lying-In Hospital of Göttingen University, 1751-c1830,' in *Social History of Medicine*, **14** (1): 59-78.
[52] Hügel, *Beschreibung sämmtlicher Kinderheilanstalten*: 141.
[53] Hügel, *Beschreibung sämmtlicher Kinderheilanstalten*: 143.
[54] Hügel, *Beschreibung sämmtlicher Kinderheilanstalten*: 111.

perspective, the lack of in-patient beds would be not so much a failing as a way of maintaining the institution's focus without being distracted by matters of housekeeping such as would inevitably arise once resident patients and staff needed to be accounted for. Hügel's descriptions demonstrate just how much energy had to go into this aspect of hospital administration, providing detailed accounts of dietary provision, laundry arrangements, housekeeping staff, and much more, and Whitehead and Merei had stated in 1851 that

> 'Nor would they [W & M] be willing to subject themselves to those restraints and formalities connected with the business transactions, and the deliberation of committees, which an hospital on an extended scale would necessitate.'[55]

5.5 Louis Borchardt and the Manchester Hospital and Dispensary for Sick Children

Louis Borchardt approached the issue of child health from an altogether different perspective compared with Whitehead and Schoepf Merei, and it is not clear what led him to specialise in this field when he arrived in Manchester, which was not until 1852. Having gained his MD in Berlin in 1838 he had worked in private practice until 1845, when he was sent to Upper Silesia as a Royal Commissioner to deal with an outbreak of typhus. At this point his experience of child health was no greater than that of any general physician. He was liberal in his politics, and sufficiently active in the 1848 revolution to be imprisoned for two years after its suppression. On his release he was prohibited from practising medicine. He moved to the Netherlands and Belgium before travelling to Bradford, where he had an introduction to the Steinthal family. The Steinthals were committed Unitarians, and Borchardt, an assimilated Jew, joined them in this.[56] In 1852 he moved with them to Manchester, where he established a

[55] Whitehead & Merei, *Suggestions for a Clinical Hospital*: 4.
[56] 'Louis Borchardt (1816/17-1883)' in Matthew & Harrison, *Oxford DNB*, Vol. 6: 646.

successful medical practice and in 1853 became honorary physician at the Children's Dispensary, subsequently taking an active part in the process which led to its becoming the General Hospital and Dispensary for Sick Children in 1855. The Unitarian movement was heavily involved in philanthropic works in Manchester, including running a medical dispensary.[57] It might be that Borchardt's Unitarian connections, through the Steinthal family, led him into working with children, or it might simply have been that that was where the opportunities lay. Whatever its motivation, his interest expressed itself in a purely practical fashion. Whilst involved in a number of medical societies, as well as more generally within the German community and in Liberal Party politics, he published little.[58] Borchardt was above all an activist in a range of causes, and remained so throughout his life, taking part alongside Friedrich Engels in the radical politics of Manchester.[59] He left little evidence of any intellectual legacy, but fitted very well into the North German tradition of founding hospitals as an arm of the movement for the relief of poverty.

Unlike Schoepf Merei and Whitehead, who had an entirely new type of institution in mind, Borchardt attached himself to one with a substantial history. On the 14th January, 1829, in the same year that Roberton mapped patterns of childhood disease in Manchester [Chapter Two], a public meeting was held to discuss the setting up of a General Dispensary for Children in Manchester and Salford. This would be the first in a provincial town. Records are patchy, and the first surviving annual report dates from 1833.[60] The rules as set out in the 1843 report were as follows:

- Any sick child seeking treatment must be recommended by a subscriber
- Children would be admitted as outpatients

[57] Wach, H.M. 'Unitarian Philanthropy and Cultural Hegemony in Comparative Perspective: Manchester and Boston, 1827-1848,' *Journal of Social History,* **26**: 3 (Spring, 1993), 539-557.
[58] Matthew & Harrison, *Oxford DNB*, Vol. 6: 646.
[59] Barnes, P.A. *Hospitals and Childhood: A Case Study of the Royal Manchester Children's Hospital "Pendlebury", 1829-1999.* (Manchester University: unpublished MPhil Thesis, 2001).
[60] Barnes *Hospitals and Childhood*: 26-31.

- They must be aged under 14 years

- Home visiting could be offered to children living in Manchester and Salford[61]

Borchardt became Honorary Physician at the Dispensary in 1853, and the first six in-patient beds were opened in 1854. It is not clear just how far he was responsible for this development; he would have been familiar with such hospitals from his German experience, but the General Dispensary was not the only one of its kind to consider opening in-patient beds during this period, and the goals it set itself were relatively unambitious, in keeping with those of similar institutions in both Britain and Germany. In its obituary of Borchardt, the *British Medical Journal*, while generally appreciative of his work, noted simply that 'in 1853 he became connected with the Children's Dispensary, which developed in time into the Children's Hospital at Pendlebury….'[62] There is no suggestion that he was responsible for this development.

In the institution's 27th Annual Report, published in 1856, two trends were apparent: costs were rising substantially, reflecting the additional burden of caring for in- patients; and the number of German names featuring as subscribers was increasing. The Hospital's objectives, as stated in the report, were now:

- The medical and surgical treatment of Poor Children

- The attainment and diffusion of knowledge regarding the Diseases of Children[63]

It is probably significant that the second objective, regarding the attainment and diffusion of knowledge, appeared just at the time that Whitehead and Schoepf Merei were opening their Clinical Hospital for the Diseases of Children, with precisely this emphasis on research and education [see below].

[61] Barnes, *Hospitals and Childhood*: 33.
[62] 'Louis Borchardt, M.D., Manchester', in *British Medical Journal*, 24th November, 1883: 1047.
[63] Barnes, *Hospitals and Childhood*: 44.

Permission was granted by the hospital's Board to expand provision to 25 beds.[64] Its membership in 1859 included the Reverend H.M. Steinthal.[65] Despite the second aim set out in the 1856 report, there is little evidence to be found in the medical literature of the period of publishing activity by Borchardt or anyone else associated with the hospital, while on the other hand the institution pursued its therapeutic goals vigorously.

5.6 Conclusions

The Manchester case shows firstly, with St. Mary's, a failed attempt at trying to compromise the care of children with other priorities, and provided ammunition for those who were campaigning for dedicated hospitals for young children. Secondly, it demonstrates that there was more than one conception of what a children's hospital could be. It could on the one hand, as with Borchardt at the Children's Hospital, be an arm of poor relief, providing focused and hence, it was to be hoped, more effective care for a particularly needy group of patients, and concentrating on the needs of those individual patients. This was the conservative view of the hospital, following the broadly medical model of care. On the other hand, it might follow Whitehead and Schoepf Merei's path at the Clinical Hospital and take a broader view, concentrating on research and teaching; rather than assisting a limited number of individuals it could provide the knowledge and education which would improve the lot of whole classes within society, addressing the problem raised by Walker when he complained that disease was 'manufactured by wholesale' but 'treated by retail'.[66]

Public health had grown out of the statistical movement: a growing understanding of demographics had in turn illuminated the significance of environmental factors in influencing morbidity and mortality. Three things were needed: more information; a healthier environment; and education to prevent unhealthy conditions from developing

[64] Barnes, *Hospitals and Childhood*: 45.
[65] Barnes, *Hospitals and Childhood*: 42.
[66] Walker, G.A., letter to the *Lancet*, 25.11.1843: 266.

in the future. This was the public health movement's great insight – that disease could, by proper measures, not only be managed but even prevented, and not through medical means. The Clinical Hospital could offer two of these three things: through its emphasis on research and teaching it promised the possibility of significant advances in knowledge not just about children's diseases but also about healthy children, an important insight if prevention of disease were to be given due priority; and the commitment to educate professionals and laypeople was there from the start. What was missing, in comparison, say, with West's mission at GOSH, was the desire to provide respite care for children, in-patient beds being regarded, in the first instance, as too much trouble. The price of this approach was the diminution of the individual, as the relatively small number of children admitted to hospital became raw material for research which would enable social action to be taken to promote health rather than merely to treat disease. It was, though, the vision which put children's hospitals at the heart of the public health movement.

The Manchester case illustrates the tension which can exist between the demands of patient care on the one hand and research and teaching on the other. Whitehead and Schoepf Merei made it clear that they did not want to be bogged down with all the day-to-day administrative matters which would be involved in running a substantial in-patient programme and would distract them from their research. For them, their patients were to a large extent raw material. The next chapter will show how the founders of the Hospital for Sick Children in Edinburgh aspired to combine research with their social and clinical action, but found their energies dominated by the sheer scale of the public health crisis with which they were faced.

6 Public health at the forefront: Liverpool and Edinburgh

6.1 Introduction

It has been the contention of this thesis that, contrary to established accounts, the origins of the first British hospitals to be created especially for young children can be explained in terms not of any therapeutic aims but of the emergence of the public health movement during the second quarter of the nineteenth century. It has also been suggested that a number of these hospitals were intended as centres for research and teaching, rather than primarily for active therapeutic intervention. These arguments can all be tested in the case of the Hospital for Sick Children in Edinburgh, but it is both here and in Liverpool that public health concerns appear to have been at the forefront of the founders' minds. The two cities provide an interesting contrast, given that, faced by similar environmental and social problems, the medical community in Liverpool responded with a concerted campaign which placed it in the vanguard of the public health movement, whereas public health reform in Edinburgh took a generation longer to get started. Nevertheless, both cities opened hospitals for sick children within the same decade, and would acquire in-patient beds within a little over three years of each other.

The chapter begins by considering the crisis in public health in Liverpool which led to the reforms pioneered by William Duncan and others, and which inspired the opening of the Liverpool Infirmary for Children. It will be seen that, despite the recognition which is accorded to the city for the leading part it played in the early years of the public health movement, the first decade of the Children's Hospital is very poorly documented, as a result of which there is a limit to the conclusions which can be drawn.

It is followed by an examination of the specifically Scottish context in which the Edinburgh Children's Hospital was founded. This will be shown to have worked both in the hospital's favour and against it, since the public health movement took longer to

develop in Scotland,[1] but on the other hand the university-based system of medical education helped ensure that when the hospital did open it was clearly linked to a mission for research and teaching. It has been suggested that Scottish attitudes towards the poor were milder and less punitive than those in England, which led to a less restrictive admissions policy.[2]

Section 6.4 will consider the arguments which were made for the opening of a children's hospital in Edinburgh. It will be seen that advocates such as John Smith and Charles Wilson were having to draw on statistical evidence from England because so little comparable work had been done in Scotland, but they were able to use these statistics to dispose of arguments which had previously been raised to oppose measures of the kind which were now being proposed.

The following section examines the evaluation of the hospital's first ten months in operation, and the chapter concludes that the Sick Children's Hospital in Edinburgh in some ways represents the end of the pioneering phase in the history of children's hospitals in Great Britain, in that its founders were consciously drawing on the lessons of earlier institutions such as that at Great Ormond Street and similar hospitals abroad, rather than starting from first principles. It represented a synthesis of the different approaches attempted by the hospitals which have been discussed in earlier chapters, bringing together respite, research, and education in one institution.

6.2 Public Health Concerns: The Liverpool Infirmary for Children

Despite its claims to being one of the pioneering institutions in the British movement for children's hospitals, having opened to out-patients in 1851, the early years of Liverpool Infirmary for Children have not been the subject of a detailed institutional history;

[1] Hansard (1803-2005) Acts.
[2] Blaikie, A. 'Household Mobility in Rural Scotland: The Impact of the Poor Law After 1845', in *Scottish Tradition*, Vol. 27, 2002: 23-41.

Bickerton mentions it in passing,[3] whilst Claydon hurries past the early years to the time two decades after its foundation when the narrative can be dominated by conventional accounts of operations performed and new facilities opened.[4] Franklin provides a coherent but brief version.[5] Such accounts as survive are contradictory in places; records are scarce and have been explored by Ward, who provides some clarification in two short papers.[6] This section examines the social and medical context in which the Infirmary was founded and links this to the aims of Stephens, the founder, and his sponsor, Gregson. The main primary sources are accounts in the local press, these being of necessity supplemented by reference to secondary material.

The early history of the Liverpool Infirmary for Children demonstrates the influence of the public health movement on medical reform and innovation. A local obstetrician, Samuel Malins, had issued a plea for a dispensary in 1832.[7] According to Ward, Malins had previously worked at the Universal Dispensary in London.[8] Malins' argument rested on Liverpool's high child mortality figures, noting that ⅓ of children died before their second birthday, and ½ had died before they reached the age of ten years.[9] As has been shown in Chapter Two, this was the period in which child mortality was emerging as a cause for concern among social commentators and reformers, and nowhere was this more the case than in Liverpool. During the 1830s a local GP, Dr. William Henry Duncan, had carried out a survey of sanitary conditions in the city. He found that a third of the population lived in cellars in poorly-ventilated back-to-back houses or in similarly crowded and insanitary courts, and he noted the statistical

[3] Bickerton, T.H. *A Medical History of Liverpool from the Earliest Days to the Year 1920.* (London: John Murray, 1936).
[4] Claydon, R. *The Story of the Royal Liverpool Children's Hospital: Alder Hey and Myrtle Street.* (London: Image Publications, 1991).
[5] Franklin, A.W. 'Children's Hospitals', in Poynter, F.N.L. *The Evolution of Hospitals in Britain.* (London: Pitman Medical, 1964).
[6] Ward, O.C. (no date) *The Liverpool Infirmary for Children, 1851-1920.* at http://www.lmi.org.uk/Data/10/Docs/18/18Ward.pdf accessed 6.7.2011, and Ward, O.C. 'Victorian Medical Politics: the fate of Dr. Alfred Stephens (1821-90),' *J. Med. Biogr.* 2010 Feb; 18 (1): 10-14.
[7] Malins, S. *Remarks on the necessity for establishing, in Liverpool, a dispensary for children.* (Liverpool: Thos Kaye, 1832).
[8] Ward, *The Liverpool Infirmary for Children.*
[9] Malins, S. *Remarks on the necessity for establishing, in Liverpool, a dispensary for children.* (Liverpool: Thos Kaye, 1832).

connection with epidemic disease, particularly cholera.[10] He worked at length to bring the situation in Liverpool to the attention of the various authorities, giving evidence to: an inquiry into Liverpool Corporation in 1833; the 1836 Commission of Inquiry into the Poor in Ireland (many of whom attempted to improve their lot by migrating to Liverpool); and to the House of Commons' Select Committee on the Health of Towns in 1840. In 1843 he published an influential paper entitled 'On the physical causes of the high rate of mortality in Liverpool', and he was a prominent member of the Health of Towns Association (established in 1844).[11] It was largely due to Duncan's campaigning, rooted in his systematic collection of health statistics for the city, that in 1846 the Liverpool Corporation secured a private Act of Parliament, the Liverpool Sanitary Act, which established public health as a function of local government there and empowered the Corporation to appoint Britain's first Medical Officer of Health, as suggested by Edwin Chadwick in his 1842 *Report on the Sanitary Condition of the Labouring Population*, to which enquiry Duncan had supplied information. That first MOH was Duncan, who set about reforming housing conditions in the city, which now found itself in the vanguard of the public health movement.[12]

Duncan's achievement was to bring public health to the attention of Liverpool's most prominent citizens, and thereby to translate his campaign into practical action. He was a member of the city's Athenaeum Club, which brought together the city's social, economic, and political elite, and his work was frequently discussed at its meetings.[13] It was in this context that the Liverpool Infirmary for Children was founded. Accounts of its early years are contradictory in places. Its first location was undoubtedly a house in Upper Hill Street. One account has it that Matthew Gregson, a timber merchant, acquired the house in 1848 and enlisted the help of Dr. Alfred Stephens in opening it as

[10] Ashton, J.R. 'Back to back housing, courts, and privies: the slums of 19th century England', in *J. Epidemiol. Community Health*, (2006) 60: 654.
[11] Matthew, H.C.G. & Harrison, B. (eds.) (2004) *Oxford Dictionary of National Biography*, Vol. 17: 252-3.
[12] Chave, Sidney.P.W. (1980) 'The Rise and Fall of the Medical Officer of Health', *Community Medicine* (1980) **2**, 36-45.
[13] The Athenaeum, *Dr. William Henry Duncan (1805-1863)*, at http://www.theathenaeum.org.uk/notables/page7.html - accessed 7.7.2011.

a children's dispensary.[14] This version is supported by the presence of a commemorative plaque which places the foundation in 1848. The earliest surviving evidence, however, is that of the 1851 census, which identifies the house in which the hospital opened as being the one next door to Stephens' own.[15] Bickerton agrees with this date,[16] whilst Franklin is more specific, stating that it opened as the Liverpool Institution for the Diseases of Children on the 3rd March, 1851, and changed its name to the Infirmary for Children in 1853. In 1856 the decision was made to open in-patient beds, and in that year it moved to larger premises in Great George Street; the eight new beds were ready for occupation in January, 1857.[17]

The founders' objectives were:

> a) to provide medical treatment and medicines for children of the poor
>
> b) to promote the advancement of medical science with reference to the diseases of infancy and childhood
>
> c) to diffuse among the poorer classes a better acquaintance of young children during sickness
>
> d) to afford opportunities for the training of women in the special duties of children's illnesses[18]

In these aims, personal medicine and public health concerns come together. Duncan had opposed the extension of medical care, arguing that public health measures were the key to reducing mortality in the city.[19] Stephens, on the other hand, was a practical man of medicine, having qualified firstly as a Licenciate in Midwifery in Dublin in 1843, where he would have encountered the work of Evanson and Maunsell at the Pitt Street Institution. He subsequently gained his Membership of the Royal College of Surgeons

[14] Claydon, *The Story of the Royal Liverpool Children's Hospital.*
[15] Ward, *The Liverpool Infirmary for Children*.
[16] Bickerton, *A Medical History of Liverpool*.
[17] Franklin, 'Children's Hospitals'.
[18] Ward, *The Liverpool Infirmary for Children.*
[19] Franklin, 'Children's Hospitals'.

in 1845 but took no higher degree, published no scientific papers or books, and took no part in the life of the Liverpool Medical Institution, the society at which the city's medical and surgical elite exchanged ideas and read papers concerning their latest cases and findings.[20] He had been selected to lead the project by the philanthropist, Gregson, who presumably chose the man whose outlook he found matched his own; Gregson remained influential, being the charity's first President. The institution's aims sought to reconcile the more traditional approach to child health, that of treating individual cases of disease, with the new public health ethos in which Liverpool was a leader. Two of the four aims deal with the education of women to enable them to provide more effective care for sick children, although they say nothing about a more preventative approach. This community-based approach is supported by statistics: in 1860 the hospital treated 1,761 outpatients and just 56 in-patients. Unlike Great Ormond Street and the Jenny Lind it made no distinction between medical and surgical patients, treating 24 surgical and 32 medical in-patients in that year. It also accepted infectious patients. Despite the hope expressed in aim *b*, nothing was done about research, and it was not until 1869 that the suggestion was made even to buy a microscope. No scientific papers or reports emerged from the hospital until the 1870s.[21] This was no great clinical research institution, but one which was focused on a community-based approach to working with the city's poor.

The fate of Alfred Stephens casts some light on the question as to the extent to which the founding of a children's hospital could form a stepping-stone to professional advancement, as suggested by Granshaw and Lomaxs. In 1874 Stephens was accused by the Infirmary's Medical Board of a conflict of interest, in that he referred applicants for treatment to his own surgery, where he then charged them a fee. He was required to stop doing this and complied with this demand. From this point onwards he gradually withdrew from involvement in the Infirmary's business, although he never

[20] Ward, *The Liverpool Infirmary for Children.*
[21] Ward, *The Liverpool Infirmary for Children.*

severed his connection completely.[22] This sequence of events supports Mauthner's view, cited in Chapter Four, that the founding of a children's hospital, far from being a route to professional advancement and personal enrichment, was in fact a thankless task.

6.3 The Scottish Context: public health, the Scottish Poor Law, and medical education

Chapter Two has provided an account of some of the consequences of social investigations and the development of demographic techniques for attitudes towards child health. The Royal Commission for Enquiring into the State of Large Towns and Populous Districts, appointed in 1843, looked only at England and Wales,[23] as did the subsequent 1848 Public Health Act, which has been described as 'the beginning of a commitment to proactive, rather than a reactive, public health'.[24] The Health of Towns Association was formed in 1844 to campaign for public health reform and dissolved in 1849 having achieved its objective in helping to secure the passage of the same 1848 Public Health Act.[25] No equivalent legislation applied in Scotland until the passing of the 1867 Public Health (Scotland) Act.[26] It was also in the 1860s that systematic attempts were first made at slum clearance in Scotland. There was limited provision made for this under the Police (Scotland) Act (known as the Lindsay Act) of 1862, which also allowed for the appointment of Medical Officers of Health. It was the first of these officers, Dr. Henry Littlejohn, who undertook an investigation whose results were

[22] Ward, *Victorian Medical Politics.*
[23] University of London and History of Parliament Trust, List of Commissions and Officials 1840-49, at http://www.british-history.ac.uk/report.aspx?compid=16910#s5, - accessed 4.11.2012.
[24] Hamlin, C. & Sheard, S. 'Revolutions in Public Health: 1848, and 1998?', *BMJ*, 1998 August 29; 317 (7158): 587-91.
[25] Hamlin, C. Health of Towns Association, *Oxford DNB* at http://www.oxforddnb.com/templates/theme-print.jsp?articleid=95366 accessed 4.11.2012.
[26] Hansard (1803-2005) Acts.

published in 1865 as the *Report on the Sanitary Condition of Edinburgh*.[27] This was followed in turn by the passing of the Public Health (Scotland) Act of 1867. All this took place some two decades after the campaign by the Health of Towns Association for improvements in England. The reason for this difference lies in the system of Scottish local government, which retained many mediaeval features and had failed to adapt to the changes which commercial expansion and industrialisation had effected upon the burghs. The result was an increasing dislocation between burghal administration and community, rendering any administrative action difficult, let alone concerted reform.[28] Investigations by civic authorities into slum conditions produced reports every bit as detailed and every bit as damning as those of the Health of Towns Commissions in England, but no comparable action. Initial attempts at reform such as the Burgh Reform Act (1833) did little to change anything, since underlying attitudes had not altered: the 1832 Cholera Act, for example, made it clear that cholera was seen as the consequence of a visitation from God, and indeed during the cholera epidemic of 1853, city officials had asked Palmerston, the Prime Minister, to proclaim a national day of fasting and humiliation in the hope of bringing down divine intervention to halt the outbreak. Palmerston refused, and suggested they build drains and toilets instead.[29] It is striking how little has been written by recent historians about this period in Scottish sanitary history – standard accounts of the history of public health in Great Britain deal almost exclusively with England.[30] Individual writers published essays describing the overcrowding, squalor, and insanitary conditions prevailing in Edinburgh in the 1840s, but the most influential appears to have been one Dr. James Stark, whose most

[27] Smith, P.J. 'Planning as Environmental Improvement: Slum Clearance in Victorian Edinburgh', in Sutcliffe, A. (ed.) *Planning and Environment in the Modern World: vol 1, The Rise of Modern Urban Planning 1800-1914,* (London: Mansell, 1980).
[28] Chalmers, A.K. *The Health of Glasgow 1818-1925: An Outline.* (Glasgow: Glasgow Corporation, 1930): 7.
[29] Ashley, A. *The Life and Correspondence of Henry John Temple, Viscount Palmerston, v1.* (R. Bentley & Son, 1879): 265.
[30] See, for example, Smith, F.B. *The People's Health 1830-1910.* (London: Croom Helm, 1979) and Wohl, A.S. *Endangered Lives: Public Health in Victorian Britain.* (London: J.M. Dent, 1983).

important essay, on *The Sanatory State of Edinburgh*, published in 1847, 'proved' that Edinburgh was the most healthful city in Britain.[31]

There was, then, less sense of urgency about sanitation and slum clearance than in England, but there was also less censoriousness about poverty. The Scottish Poor Law as reformed in 1845 was less harsh than its English equivalent of 1834, and no rigid distinctions were made between 'respectability' and 'destitution'.[32] In particular, the Scottish system lacked the punitive element that was to be found in England. Ferguson has argued that the Scottish problem was the opposite of that in England: whereas in England the authorities were trying to limit the volume of claims on the system which were being made by able-bodied paupers, in Scotland the able-bodied were ineligible for relief and even the aged and impotent poor often did not get the relief to which they were legally entitled. The result was to place a great financial burden on medical men, who found themselves treating the needy at their own expense and seeing the close connection between destitution and epidemic disease such as fever and typhus. Consequently, unlike England where much of the impetus for reform of the Poor Law came from ratepayers seeking to limit the scale and expense of claims, in Scotland it was medical men who argued for the expansion of both poor relief and sanitary reform.[33] Outdoor relief continued to be offered under the reformed system, to the extent that poorhouses were half-empty during the second half of the nineteenth century, [34] but it was entirely consistent with this approach that hospital care might be offered in order that the sick might be enabled to resume life within their own communities.

If interest in public health was somewhat stagnant, at least among the civic authorities, and welfare provision was dependant on charitable efforts, medical education was

[31] Tait, H.P. *A Doctor and Two Policemen: The History of Edinburgh Health Department 1862-1974.* (Privately published, 1974): 16.
[32] Blaikie, A. 'Household Mobility in Rural Scotland: The Impact of the Poor Law After 1845', in *Scottish Tradition*, Vol. 27, 2002: 23-41.
[33] Ferguson, T. *The Dawn of Scottish Social Welfare: A Survey from Mediaeval Times to 1863.* (London: Thomas Nelson, 1948).
[34] Blaikie, A. 'Household Mobility in Rural Scotland: The Impact of the Poor Law After 1845', in *Scottish Tradition*, Vol. 27, 2002: 23-41.

undergoing a period of vigorous revival. Following a period of decay, and faced by competition from the growing medical faculty at Glasgow University, the Edinburgh university medical school had been revitalised from the 1830s onwards and its professors were determined to maintain this lead. Much of this modernisation had been achieved by importing ideas from Continental medical schools.[35] There had even been mention in the later 1840s of opening a children's hospital attached to the medical school, but this had not progressed beyond the talking stage.[36] There was no question here, as there had been in some English circles, of assuming that foreigners just could not do things quite as well, or that there was nothing to learn from them. The case of Hospital for Sick Children in Edinburgh demonstrates that individual Scottish physicians were well aware of the public health dimension to the high levels of morbidity and mortality prevailing among the city's children, and that, inspired in part by Continental examples, they saw a specialist hospital as going some way towards offering a solution.

There was a potential in Scotland for paediatric medicine to develop simultaneously in the clinic and in the university, along Austrian lines, in a way that was not so immediately apparent within the English system of medical education, and there were campaigners in Edinburgh who hoped for this, but this hope would not be fulfilled, at least in the short term. Paediatrics as a discipline in its own right first did not become a compulsory part of the medical curriculum until introduced by Glasgow University, Edinburgh's greatest rival, in 1914.[37] It was also Glasgow University which opened Britain's first academic Department of Child Health, in 1924,[38] and which also instituted the first Chair of Paediatrics in 1929.

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[35] Lawrence, Christopher. 'The Shaping of Things to Come: Scottish medical education 1700-1939', in *Medical Education*, (March, 2006) Vol. 40(3): 212-5.
[36] *Edinburgh Medical Journal*, Vol. IV, July 1859-June, 1859: 1147.
[37] Carruthers, G. B. & Carruthers, L .A. (2005) *A History of Britain's Hospitals* (Sussex: Book Guild Publishing, 2005): 277.
[38] University of Glasgow, 'Historian appointed to document the life and times of the nation's favourite children's hospital', at http://www.gla.ac.uk/news/archive/2010/july/headline_153190_en.html accessed 9.7.2011.

6.4 Making a case for a children's hospital

Charles Wilson was a physician who had moved to Edinburgh from Kelso in 1854 and who had shown a sustained interest in the health of children, publishing a number of pieces in the local medical press on conditions such as croup. In 1856 Wilson published an extensive article in the *Edinburgh Medical Journal*, ostensibly a review of a series of annual reports from children's hospitals in Vienna, Stockholm, and London, but actually a cogent case for the opening of such a hospital in Edinburgh.[39] Wilson's case began with Farr's Life Tables, the wide variations of life expectancy which existed between children raised in different parts of England (equivalent statistics not yet being available for Scotland), and the implication that many deaths were preventable. In particular, he noted the prevalence among the poorer classes of conditions such as scrofula, consumption, brain diseases, and epidemics, complaining that '…yet it is precisely in this class of diseases that the practitioner…possesses no proportionately effective opportunities of obtaining a direct and practical instruction.'[40] For the first time in the context of the argument for children's hospitals he explicitly rejected the Malthusian argument that high levels of mortality were simply natural correctives to excessive birth rates, explaining that statistical information demonstrated that high birth rates were in fact a consequence of high levels of mortality rather than its cause. It will be seen that this argument would be raised again in connection with the Edinburgh Sick Children's Hospital. Wilson went on to describe the consequences of child morbidity in terms of the debility of the surviving population, the inability of physicians to remedy this, and the drain which this placed on the resources of the rest of society. His claim for the benefits of children's hospitals rested not on their therapeutic competence but, by comparison with Continental models, on their offering the possibility of the relief of suffering, the 'extensive and effectual investigation' of disease, and 'a permanent and a periodical body of literature'. He cited the examples of Vienna and Stockholm and praised the inclusion of children's diseases in Continental medical

[39] Wilson, C. 'Reviews' in *Edinburgh Medical Journal*, **1**, (XI) May 1856:1027-1037.
[40] *Edinburgh Medical Journal*, Vol. 1: 1030.

curricula, and in particular the fact that 'instruction in the diseases of children is not left to the subsidiary position of being appended to the duties of some other chair, but constitutes the peculiar charge of an independent professorship….'[41]

That his priorities lay with education and training is further made clear by the detailed specification which he laid out for his proposed hospital. It should have sixty beds, admit children aged between two and eight years, and also have an ambulatory clinic which would accept children who were too young to be separated from their mothers. All this 'would suffice for the purposes of medical education in such an establishment',[42] that being his primary concern. Pupil nurses could also be instructed at the new hospital, for service with wealthy families and also more widely in the community. Provision should include three medical and one surgical wards, as well as two isolation wards for children with contagious diseases. He gave considerable detail as to other facilities, staffing, and potential sources of funding, and concluded with the plea that

> 'Humanity has its urgent plea with us, as with other cities, as shewn by our statistics: science has its equal plea everywhere, and to become insensible to it is to resign our pre-eminence…. The establishment of a better system of investigation and instruction for the diseases of children is now a matter in which, in this country, we must either aspire to lead or be constrained to follow.'[43]

He was right to make comparisons with Europe, because the Scottish system of university-based medical education resembled those found in parts of Europe far more than that of England, which was located largely in individual hospitals. The Universities of Glasgow and Edinburgh were also pioneers within Britain of the attempt to integrate the study of botany and chemistry into the practice of pharmacy and medicine,[44] and so

[41] *Edinburgh Medical Journal*, Vol. 1: 1031.
[42] Wilson, 'Reviews': 1035.
[43] Wilson, 'Reviews': 1037.
[44] Bonner, T.N. *Becoming a Physician: Medical Education in Britain, France, Germany, and the United States, 1750-1945.* (Oxford: Oxford University Press, 1995).

were more open than their English counterparts to adopting the new laboratory-based approach to medicine.

Wilson's plea produced no immediate response, and in 1858 he tried again. Reviewing Tanner's *Practical Treatise on the Diseases of Infancy and Childhood*, Wilson noted that medical students gained little practical instruction in this area, having to rely on books and a few lectures. While he praised the book for helping to remedy the deficiency, he stressed that proper instruction would only be available where there were children's hospitals.[45] Wilson's articles were collected in a pamphlet and circulated among his friends, but had little effect before 1859.[46] In it he made the point that, whilst Glasgow was seeking the plaudits for being the first Scottish city to open a hospital for children, in the light of what had been achieved elsewhere at home and abroad it was more apposite to talk in terms of who should get the opprobrium for being the last to do so. He also addressed one of the greatest objections to admitting children to any kind of hospital, that of high mortality rates. He used statistics to show that whereas in adult hospitals the mortality rate was higher than that in the surrounding community (as might be expected in a place where the least healthy members of the populace are gathered together), in those districts where there were children's hospitals the mortality rate within them dropped to around half of that found in the surrounding community.[47] Here was evidence not just that it was safe to admit children to hospital, but also to support the idea that children were particularly vulnerable to ill-health caused by environmental conditions, and that the case for children's hospitals was qualitatively different from that for hospitals for adults.

In February, 1859, a physician named John Smith wrote to the *Scotsman* (using the pen-name Sigma MD) asking why Edinburgh had no hospital for sick children and

[45] *Edinburgh Medical Journal,* Vol. IV, July 1858-June 1859: 136.
[46] Wilson, C. *On the Expediency of Founding an Hospital for the Diseases of Children in Edinburgh; with notes on Continental Children's Hospitals.* (Edinburgh: Sutherland and Knox, 1859).
[47] *Edinburgh Medical Journal,* Vol. IV, July 1858-June 1859: 136.

arguing that this lack hindered the practical teaching of children's diseases at the Medical School, where he was a lecturer. He said that inaction was a crime:

> 'When starvation, helplessness and neglect – nay, perhaps brutality – are added to bodily illness, the picture may become a painful one, but it is one to which we must not shut our eyes; if we do – if communities know such miseries to exist and provide no redress, no means of their alleviation – it becomes something more serious than a mere omission.'[48]

He emphasised the need for the relief of misery and listed teaching as an additional benefit. He maintained that mixing children in hospital with adults was unsustainable, and that one result of this approach in the past had been either to ignore the study of children's diseases altogether or to leave them lodged somewhere between midwifery and physic.[49]

In 1848, while still studying medicine, Smith had travelled with a colleague, Henry Littlejohn, to Paris, where they visited the *Enfans Malades*. Smith subsequently wrote that

> 'There is no question whatsoever that it seemed inconceivable and altogether unaccountable that while almost every municipality on the continent of Europe possesses at least one, if not two, hospitals specially devoted to children's diseases, no such institution was to be found in the famous medical centre of Edinburgh.'[50]

Smith's arguments produced rapid results. In March, 1859, George Barclay, a merchant whose father had been the first Lecturer in Surgery at Marischal College, Aberdeen, wrote to the *Scotsman* offering £100 towards the establishment of a

[48] Birrell, *A Most Perfect Hospital*: 10.
[49] Guthrie, D. *The Royal Edinburgh Hospital for Sick Children, 1860-1960.* (Edinburgh & London: E. & S. Livingstone, 1960).
[50] Birrell, G. *A Most Perfect Hospital: The Centenary of the Royal Hospital for Sick Children at Sciennes.*(Edinburgh: Edinburgh Sick Children's NHS Trust, 1995): 8-9.

children's hospital. Smith followed this up with a vigorous campaign which the *Scotsman* supported in an editorial article, arguing that the establishment of a children's hospital would bring benefits to both treatment and research, and making the case that it should assist all classes.

On the 5th May, 1859, a public meeting at the Freemasons' Hall in George Street agreed on the opening of a hospital for sick children. It would admit children between the ages of between two and eight years, and unlike the hospital at Great Ormond Street would accept both medical and surgical cases, just as Wilson had proposed. Benefactors would gain preference in nominating children for admission, but nomination was not a necessary condition – it was enough that a child be destitute, with no distinction being made between 'deserving' and 'undeserving' poor. It was clearly stated that the training of 'medical pupils' and nurses was one of the great aims of the hospital.[51] It also pointed out that not all children need be admitted as in-patients, since many could be supported in their own homes.[52]

Acknowledging that there were those who questioned the need for separate children's hospitals to be created at all, a Mr. Maitland asserted to general agreement that young children had care needs (as opposed to medical needs) that were distinct from those from adults and which could not be met by common hospitals, and so

> 'if the condition of the child was not well fitted for a common hospital that they had better try and fit an hospital for the child.'[53]

This statement is significant for the explicit way in which it makes the child's perspective the central concern, and, building on West's work, makes the care of the child more than merely a technical medical issue.

[51] 'Hospital for Sick Children', *The Daily Scotsman*, 7 May, 1859: 4.
[52] Interim Committee for the Proposed Edinburgh Hospital for Sick Children, *An Appeal on behalf of the Proposed Hospital for Sick Children in Edinburgh.* (Edinburgh, 1859).
[53] *The Daily Scotsman*, 7 May, 1859: 4.

The Dean of the Faculty of Advocates emphasised another aspect of the benefits of such a hospital, one that had been indicated by West, and this was the cost to the family of supporting a sick child. If a mother had to give up work in order to tend her child this could mean starvation for her family, and the Dean estimated that this situation could affect one family in three in the poorer parts of the town.[54] Simply providing a brief respite would bring enormous relief to such families, and would be far from depriving them of their children in the way that opponents of children's hospitals had suggested, besides which a separation of a week or two was, he said, preferable to the permanent separation of the grave.[55] A leaflet which was circulated after the meeting in order to build support for the project stated matters rather more brutally, asserting that it was often the home circumstances which had made the child sick in the first place, and ascribed this to a combination of poverty and maternal callousness.[56]

A Professor Miller discussed objections which had been raised to creating a new breed of specialist practitioner, dismissing these in the light of the many specialists who were already accepted in fields such as ophthalmics, dermatology, and internal medicine. He could only see it being a good thing that some physicians would gain a more expert knowledge in the diseases of children.[57]

The meeting made, or possibly clarified, some striking claims about the role of the hospital as envisaged by campaigners during this period. The notion that providing care for the children of the poor would undermine their independence and sense of responsibility had been completely discarded, but at the same time it did not shy away from blaming the poor for at least some part of their misfortune. Above all, it subscribed wholeheartedly to the environmental model of health. Children became sick because of their surroundings and the poor quality of care which they received.

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[54] *The Daily Scotsman*, 7 May, 1859: 4.
[55] *The Daily Scotsman*, 7 May, 1859: 4.
[56] Interim Committee, *An Appeal….*
[57] *The Daily Scotsman*, 7 May, 1859: 4.

The role of the hospital was thus, in the words of the commonly-made distinction, neither care nor cure, in as much as the traditional notion of caring was linked to comforting the patient and allowing nature to take its course, whereas curing presupposed the ability of doctors to apply therapies which would lead to an improved outcome.[58] The therapeutic role of the children's hospital as expressed in Edinburgh continued the mission envisaged by West, but was more clearly articulated; intervention was active to the extent that the causative agent (the child's home environment) had been identified and suitable action had been taken (withdrawal of the child from that environment). Treatment, however, would in many cases involve neither medication nor surgery, but nor would it simply be a matter of letting nature take its course since the cure would only prove to be a lasting one if the home circumstances could be altered. Indeed, despite Wilson's ambitions as expressed in 1856, the first surgical ward was not opened until 1887.[59] Instead, the chief purpose of the hospital would be to provide a respite from the conditions that had made the child sick. Here is the importance of the stress on managing children as out-patients in their own homes: admission to hospital was a drastic last resort, which on its own would only provide remission rather than cure. What was meant by management at home was surely the (re)education of the parents, and in particular the mother, so that household management could be improved and a healthy environment provided for the child.

The meeting agreed on four aims for the new hospital:

1) To provide for the reception, maintenance and medical treatment of the children of the poor during sickness within a cheerfully and salubriously placed building, having such adjuncts of open garden and play ground attached as are everywhere recognised as peculiarly necessary for establishing the health of

[58] Rivett, G. 'Hospital Histories', in *Social History of Medicine*, (1993) 6 (3): 429-437.
[59] RHSC (2012) Royal Hospital for Sick Children History, at http://www.nhslothian.scot.nhs.uk/OurOrganisation/AboutUs/OurHistory/Pages/RHSCHistory.aspx - accessed 4.11.2012.

convalescents in the early periods of life; and to furnish with advice and medicine those who cannot be admitted to the hospital.

2) To promote the advancement of medical science with reference to the diseases of childhood by affording the opportunity of those being studied where grouped in sufficient numbers under the observation of those who devote to them particular attention; and especially to provide for the more efficient instruction of students in this department of knowledge.

3) To diffuse among all classes of the community and specially to impart among the mothers of the poor, a better acquaintance with the management of infants and children during health or sickness and to assist in the education and training of women in the special duties of children's nurses.

4) To conduce, in this way, not only to the mitigation of the virulence of epidemics and to the saving of many lives, now hopelessly sacrificed, but also to awaken the affections of the heart, by surrounding the patients with acts of kindness, the recollection of which they will carry with them, and this to exercise a beneficial influence on themselves and their relatives and friends.[60]

The leaflet issued by the committee also mentioned 'promoting habits of decency and order among all who are influenced by the institution'.[61] Here is the clearest statement of the ideology which underlay the new institution. Whilst there is no doubting the compassion of its founders, the underlying attitude was uncompromisingly paternalistic.

By the time these principles were incorporated into the hospital's constitution, they had been somewhat simplified.

[60] Birrell, *A Most Perfect Hospital:* 13-14.
[61] Interim Committee, *An Appeal*: 9.

1) to provide for the reception, maintenance, and medical treatment of the children of the poor during sickness, and to furnish with advice and medicine those who cannot be admitted into the hospital

2) to promote the advancement of medical science with reference to the diseases of childhood, and especially to provide for the more efficient instruction of students in this department of knowledge

3) to diffuse among all classes of the community, and chiefly among the poor, a better acquaintance with the management of infants and children during health or sickness, and to assist in the education and training of women in the special duties of children's nurses[62]

It will be noted that the wording of these aims is almost identical to the final version given at the opening of the hospital in Great Ormond Street in 1852.

The importance of healthy surroundings, the orderly classification of diseases, and the principle of kindness which are the in earlier version were now omitted, possibly being considered more suitable matters for the hospital's rules, for among the latter was the requirement that

> 'It shall be the duty of every nurse, not merely to tend the children with gentle firmness and care, but also by all means to keep them cheerful and contented; and while impatience, ill-temper, or anger towards the patients will be followed by dismissal, the inability generally to make children happy will of itself be regarded as a sufficient cause for not retaining a nurse in the service of the hospital.'[63]

This can be compared with the advice given by Charles West in 1854, having had two years' experience of running GOSH. He was very clear that nurses who did not love children were in the wrong job. They must be prepared not only for the ways in which a

[62] EHSC *Constitution and Rules of the Edinburgh Sick Children's Hospital, 1859:* 11.
[63] EHSC *Constitution and Rules:* 13.

sick child might try their patience, but also to cope with rude or ungrateful parents.[64] Nurses, he wrote, had a 'duty of amusing sick children,' and he went on to say that 'your special business…when a child is ill is to give it pleasure.'[65]

In keeping with the previous year's proposals, the hospital would admit children between the ages of two and eight years as in-patients; younger children might be admitted, with or without their mothers, in exceptional circumstances. No recommendation was necessary for admission, although where there was competition for a bed a child with a subscriber's recommendation might receive preferential treatment. The two requirements for admission were that a child be destitute and suffering from illness or disease. It was not, however, intended that long-term care be provided. Children of parents who were not in poverty might be admitted on payment of a small sum, if their home circumstances were not suitable for supporting treatment, or if the child were suffering from a condition which could not be treated at home. The criteria for admission as out-patients were somewhat looser: the children of poor parents might be admitted at any age from birth to twelve years.[66]

Just as happened with the Jenny Lind in Norwich, there were problems in finding suitable premises because of objections from local residents who disliked the idea of living close to a hospital, but the problem was rapidly overcome. A site was found in July, 1859; the building's owners had leased it to the hospital for five years, and when they discovered what it was to be used for they made an unsuccessful attempt to secure an interdict to prevent it from opening. Nevertheless, twelve beds were bought in December (later increased to twenty-four), and the hospital opened on the 15th Feb, 1860, with twenty beds and a dispensary.[67] The first Matron, Mrs. Booty, had formerly

[64] West, C. *How to Nurse Sick Children; Intended especially as a help to the nurses at the hospital for sick children: but containing directions which may be found of service to all who have charge of the young.* (London: Longman, Pearson, Green, and Longmans, 1854): 61-2.
[65] West, C. *How to Nurse Sick Children; Intended especially as a help to the nurses at the hospital for sick children: but containing directions which may be found of service to all who have charge of the young.* (London: Longman, Pearson, Green, and Longmans, 1854): 61-2.
[66] EHSC (1859) *Constitution and Rules*: 11-14.
[67] Birrell, *A Most Perfect Hospital*: 13-15.

worked at Great Ormond Street Hospital, which might explain the similarities in the two institutions' approaches to the nursing care of children.[68]

As Wilson had predicted, there was opposition from the Edinburgh Royal Infirmary, which feared losing out in competition for charitable donations. Its management offered to admit children under six years of age in return for receiving the funds earmarked for the children's hospital, but this offer was declined.[69] A progress report in the *Edinburgh Medical Journal* noted that the new hospital would be

> '…not only a boon conferred upon a greatly suffering class of our population, the children of the destitute poor, but as a useful, and as yet apparently disregarded, adjuvant in the instruction of those training for the medical profession.'[70]

It added that the rich would benefit, too, from the better training of their medical attendants. What is important here is the reference to the 'children of the destitute poor': in contrast to earlier arguments about providing care for the children of the poor, no attempt was made to distinguish between poverty, the proper object of charity, and pauperdom, the province of the Poor Law, or indeed between the deserving and the undeserving poor. Unlike the comparable English institutions, there is no sign of any concern that the undertaking would undermine the moral fibre or independence of the poor parents whose children might be its beneficiaries.

Just before the hospital opened there was discussion of its progress at the 1860 Annual General Meeting. The outward-looking mission of the hospital was made explicit by a Professor Robertson, proposing the first resolution, which recognised the hospital's duty to provide for the care of sick and destitute children and its claims upon the liberality of the public. The professor hoped that as the children were brought from dirt and misery to be restored to health and strength they might be 'missionaries of the

[68] *Edinburgh Medical Journal*, 1858-9: 779.
[69] Birrell, *A Most Perfect Hospital*: 12.
[70] *Edinburgh Medical Journal*, Vol. IV, July 1858-June 1859: 1146.

Gospel in their own degraded homes'.[71] Another speaker asserted that hospitals could only ever be palliatives, and that

> 'if they ever wished to strike at the very root of the evil , it must not be by erecting hospitals for the sick, but by endeavouring to raise the social position of the poor.'[72]

The speaker, a clergyman, went on to address the familiar question of separating a child from its mother, something he said he would normally oppose. However, in the event that the child has become sick because of deficient maternal care, it cannot be wrong to separate them in order to rectify that deficiency. The speaker went on to point out that children were already temporarily separated from their mothers for the purposes of education, and it was accepted that this was for everyone's benefit. This was a more sophisticated attempt at reconciling the Tory defence of the family and the radical interventionist viewpoint, and shows how, by this stage, the argument for children's hospitals was becoming more nuanced.

6.5 The hospital in action: 1861 Annual General Meeting

At the time the report was prepared the hospital had been open for ten months, and much was made of the statistical comparison with the Hospital for Sick Children at Great Ormond Street after its first full year of operation.

[71] 'Hospital for Sick Children', *The Scotsman*, 9 March, 1860: 2.
[72] 'Hospital for Sick Children', *The Scotsman*, 9 March, 1860: 2.

Table 4: Comparison of the number of patients treated in GOSH and Edinburgh in their first years of activity. [73]

GOSH 1852-3 (full year)		**Edinburgh** 1860-61 (10 months)		**Edinburgh** 1860-61(full year – amended figures presented at end of meeting)	
In-patient	Out-patient	In-patient	Out-patient	In-patient	Out-patient
143	1,250	154	985	164	1,082

It can be seen that in ten months the Edinburgh hospital had exceeded the number of in-patient admissions treated at Great Ormond Street in its first full year of operation. This was not altogether surprising, since West had commented that it had taken a little while for parents to be convinced to bring their children to the new establishment, but that numbers had grown once its reputation had spread, whereas by the time the Edinburgh hospital opened such places were becoming an accepted fact. Nevertheless, the statistics were a source of great pride to the organising committee, and a confirmation that their plans were working as intended. Indeed, such was the demand for treatment that the original plan to incorporate convalescent beds and separate isolation wards for fever patients had been cancelled for lack of space. This was much regretted by the directors, since it was recognised that preventing the spread of fever in crowded dwellings might save many lives. This was a public health argument centred on the use of isolation nursing (in effect the old idea of quarantine), rather than being based on any claim to therapeutic efficacy.[74]

[73] 'Hospital for Sick Children', *Scotsman*, 22nd Jan, 1861: 4.
[74] 'Hospital for Sick Children', *Scotsman*, 22nd Jan, 1861: 4.

The directors' report referred to the three aims of the hospital – the treatment of sick children of the poor, the advancement of medical science and instruction of medical students, and the diffusion of knowledge among all classes of the community, and especially among the poor. The report stated very strongly that these aims could only be achieved if the hospital were to expand beyond its current capacity of twenty-four beds. As well as the success which had been reported in the scale of admissions, clinical instruction had already commenced and was expanding, although there is no mention of any formal links being made with the University, as Smith had intended. It is less clear what progress was being made in teaching women how to look after infants in the community. All that was reported concerning relationships with the local community is that

> 'It has frequently been said that the poor are ungrateful, and that misfortune makes them selfish. The directors have not experienced a single instance of this alleged ingratitude. On the contrary, in all cases aid has been received with a deep sense of relief; in many cases the warmest expressions of thankfulness have been tendered for the kindness of the matron, while in several cases small thank-offerings in money and in work have been made by the parents of children who had been treated in the hospital.'[75]

The point is being made very clearly that fears that charitable intervention might undermine poor families are unfounded: these parents are properly appreciative of what is being done for their children and, far from being demoralised or undermined by the assistance given, are doing what they can to demonstrate this. This was reinforced by a subsequent speaker, who claimed that the hospital had alleviated suffering which had

[75] 'Hospital for Sick Children', 1861: 4.

> ‘not been brought on by any bad conduct, by any immoral living on the part of the poor sufferers; and which they were, therefore, the more bound in Christian charity to do all they could to relieve.’

This is a different argument from that which had been advanced in earlier years in England, which saw the child as the responsibility of the parent, and proposed that by absolving the parent of that responsibility one encouraged fecklessness. The argument here was that if the child was blameless then it must not be permitted to suffer. As with West at Great Ormond Street, we can discern further indications of an understanding of the child’s perspective and interest as being quite distinct from those of the adult, and the report also commended the ladies’ committee for its work in promoting the children’s happiness during their stay.

Strong words were reserved for those who argued that child mortality was inevitable, or even desirable in that it preserved innocence uncorrupted. The Reverend W. Pulsford, arguing for expansion of the hospital, stated that

> ‘Our Saviour said…“It is not the will of my Father that one of these little ones should perish.” They were born to live – they were designed to live – they had the functions of life about them. Misfortune, negligence, or sin, it might be, had decreed otherwise; but Christianity, which was in our midst, and should also be in our hearts, was intended directly to correct these evils…’[76]

It is clear that great importance was placed on the positive relationships which existed between the hospital and both parents and children during the duration of the children’s stay. On the other hand, there is no indication of the relationship with the families continuing any further after the children’s discharge, and the third of the hospital’s aims, that of community education, does not appear to have been pursued at this stage. The closest to an aspiration which was expressed in this direction was by Mr George

[76] ‘Hospital for Sick Children’, 1861: 4.

Young, who argued in favour of the benefits of allowing children to remain in hospital for a period of convalescence so that

> 'the gentle kindness which he was sure surrounded every infant couch in this institution might sink into many a child's soul, and, like seed thrown upon the ground, might bring forth its fruit after many days.'[77]

In other words, it was hoped that admission to the hospital might assist the children's moral well-being, as well as their physical health.

The relationship with the wider populace was expressed rather more pragmatically by the Lord Advocate, in a speech seconding the motion commending directors' report and, in particular, supporting the plea for funds to enable the hospital to expand as rapidly as possible. Whilst applauding the audience's charitable and philanthropic impulses, he also sought to appeal to their selfishness and sense of self-protection, drawing their attention to the threat which fever posed to the well-being of all, regardless of social class: 'the more that it prevails among the dwellings of the poor, the more certainly it will spread to the houses of the rich'.[78] It was therefore in everybody's interest to do what they could to contain it. The narrative of Chadwick's *Condition of the Labouring Classes*, of the Health of Towns Commission, and of the many other social investigations of the period, is one of the discovery by the educated classes of the squalor in which the labouring classes lived. Hamlin, for example, suggests that people were shocked to discover the extent to which infants were being doped with opiates, as described in Chapter 2.[79] The evidence from the meetings as reported in the local press suggests that the educated classes knew very well how the poor were living and the threat which this posed for them.

[77] 'Hospital for Sick Children', 1861: 4.
[78] 'Hospital for Sick Children', 1861: 4.
[79] Hamlin, C. 'State Medicine in Britain', in Porter, D. (ed.) *The History of Public Health and the Modern State.* (Atlanta, Ga.: Editions Rodopi, 1994): 132-164.

One indication that the pioneering days were passing was that evidence gained from experience was now available to counter objections which had been raised to the opening of children's hospitals. Just as the response of parents had shown that the provision of care for their sick children did not lure them into irresponsibility and improvidence, so the hospital's finances showed that it need not be impossibly expensive to provide care for sick children. The hospital had completed its financial year with a surplus in its account and a substantial sum of money invested, and a Mr. Duncan McLaren asserted that it should be possible to double the amount of accommodation without significantly increasing the cost of staff and other expenditure. He also drew attention to the fact that

> 'contributions to the Royal Infirmary and other public charitable institutions had not been diminished by the establishment of this new institution, as some timid people had feared would be the case'.[80]

Finally, it should be noted that the hospital was run by physicians at this time, although surgeons might be called in from the Royal Infirmary to perform tracheotomies for children suffering from diphtheria. One such was Joseph Bell, who was studying there at a time when antisepsis was being introduced. He was subsequently employed as the surgeon in charge of the first surgical ward at the Hospital for Sick Children, but this was not until 1887.[81]

6.6 Conclusions

The creation of children's hospitals in both Liverpool and Edinburgh came at times of crisis in public health, but were shaped by the civic response which was taking place around them. In Liverpool there was a very active programme of environmental

[80] 'Hospital for Sick Children', 1861: 4.
[81] Raffensperger, J. 'Was the real Sherlock Holmes a pediatric surgeon?', *Journal of Pediatric Surgery*, **45** (7) July, 2010: 1567-1570.

initiatives which left the hospital to concentrate on the more immediate care needs of its patients, albeit still looking to the community through its out-patients programme, rather than developing an extensive inpatient provision. The Liverpool Infirmary for Children undertook no clinical teaching, no research, and appears to have done little in the way of public education. In a city which had led the way in establishing a Board of Health the Infirmary took its mission to be the provision of basic health care, both medical and surgical, and little more, and to leave the pioneering work to others. In Edinburgh, on the other hand, there was a need to show a greater degree of leadership, both civic and academic, in order to train a cohort of specialists who would know how to manage the public health crisis which faced the city and which was acknowledged at the hospital's annual general meetings.

The Edinburgh Hospital for Sick Children could be said to mark the end of the ground-breaking era for such institutions in Britain, since its founders were able to build upon evidence and experience gained from earlier foundations, recent though they were, and to refine the arguments which had been used in their favour. As a case study it draws together the discussions about the founding of the first hospitals for young children in three important ways: the discussions at the campaign meetings and AGMs make it possible to be clear as to the founders' intentions for which a children's hospital was to be established, and the extent to which these might be realised within the constraints of the period; it was the first British children's hospital to be established at a time when there was evidence, rather than mere arguments, available to test the objections which had long been raised against the creation of such institutions; and its founders' motives as made clear in the campaign statements and meetings can be compared with the analysis of historians of the reasons for the founding of these hospitals.

The aims of the founders were threefold: the treatment of sick children from poor backgrounds, whether as in- or out-patients; the advancement of knowledge about the diseases of children, and the teaching of medical students; and the instruction of the

public in the care of children, both healthy and sick, and in particular the education of a class of children's nurse who could look after children in the community. The most striking thing about these aims is that they are not original, being copied almost verbatim from those of the hospital at Great Ormond Street, evidence of this being a successor institution rather than a trailblazer.

Treatment was based on an environmental model of disease, whereby the key to improving a child's health was to remove it from the conditions which had made it sick. There is no suggestion that doctors themselves had any therapeutic insights. Statistical evidence underpinned this theory and the approach was further supported by humanitarian considerations, the concern being the need being to relieve families of the burden of caring for a sick child. The environmental model merged with the public health model when children suffered from fever, and it was recognised that it was in the interests of both the child and the wider community that the child be admitted to hospital and isolated, and in this context there is articulated an argument for the self-interest of the better-off townspeople in having such a hospital which is not made explicit in arguments for children's hospitals elsewhere.

There was an additional dimension to the treatment of children which was expressed far more explicitly in Edinburgh than in previous campaigns for children's hospitals, and that was the moral case. Campaigners and statists such as Roberton and Farr had suggested, *inter alia*, that if something could be done to mitigate the high levels of infant morbidity and mortality then action should be taken. Charles West had written about the need to keep children happy in hospital, but only after opening his establishment. The directors and committee in Edinburgh were clear from the outset that the health of young children was as much a moral issue as a pragmatic one. It was God's purpose that children should live, their ill-health had come about through no fault of their own, and there was no question that they should suffer because of their parents' failings. This was a clear departure from the Tory doctrines about the family which had influenced much English thinking about social policy in the earlier nineteenth

century, and a recognition of the needs and rights of the child as in some ways an autonomous individual. This was also reflected in the hospital's approach to the care of its patients, who must be treated lovingly and kept happy. While not an innovation, being a continuation of West's approach, it again respected the child as an individual with its own needs and perspective.

Little can be shown about the extent to which the teaching of medical students had progressed by 1861. There was every expectation that it would increase, but the attention of the meeting was largely divided between pride in the achievement of getting the enterprise successfully under way and concern with the moral debate which so exercised many of those present. Certainly Wilson had envisaged the hospital developing along Continental lines, with academic posts and publications and a dedicated professorial chair, all of which would, as it turned out, take some considerable time to emerge. The instruction of the public had not begun by 1861, although great progress was being made in establishing a trusting relationship with the local community which would be a necessary foundation for any kind of outreach work. Noticeably absent was the paternalistic tone which characterised the social investigations of the 1830s and 1840s, with their concerns that measures be taken by the enlightened classes for the good of the depraved lower orders. The attitude struck in the meetings was much more respectful than that.

This optimistic attitude was borne of the experience of eight years and more of children's hospitals across the Kingdom. There was now an accumulation of evidence with which to counter the many arguments which had been raised against the opening of such hospitals: statistics showed that far from threatening a concentration of mortality, children's hospitals were safer places for young children to be than the outside world; the costs were manageable; separating infants from their mothers was preferable to the permanent separation of death, and in any case separation was already tolerated in a number of other circumstances; the risk to the neighbours of having a children's hospital next door was certainly no greater than the alternative of

having uncontrolled epidemic disease in the neighbourhood; and providing assistance to the poor did not lead them into debauchery and promiscuity. Whereas the earlier hospitals had been acts of faith, the Hospital for Sick Children in Edinburgh was an undertaking based on sound evidence.

The Edinburgh Hospital for Sick Children demonstrates the new type of hospital as it was maturing. The Statists' vision of evidence-based practice was beginning to emerge, and Charles West's culture of a distinctive kind of children's nursing was starting to be transmitted between institutions. It practised an environmental model of medicine which would rapidly become overshadowed as antiseptic surgery made dramatic interventions the centrepiece and surgeons the stars of hospital life, shaping the stories which institutional hospital historians would tell.

Conclusion

The Introduction raised four questions:

- What changed attitudes among a substantial part of the medical profession towards the possibility and desirability of providing medical treatment for young children in a hospital setting?
- Why was there a sudden burst of activity in providing for this care between c1850 and 1860?
- Why was a new model of hospital created for these children, rather than incorporating their care into that provided by existing institutions?
- What distinguished the care offered by these new hospitals?

The factors which brought together a new understanding of childhood and the desire for a new kind of hospital are the emergence of the statistical movement and its influence on public health. The significance of the statistical movement was, firstly, in drawing the attention of the educated classes to the problem of infant and child mortality, which is to say that it was commonly known in the early nineteenth century that large numbers of children died at a young age, but this was assumed to be expected and entirely natural. The revelation of Farr's reports to the Registrar-General, from 1838 onwards, was that children living in industrial towns were far more likely to die than children living in rural areas; death was far from inevitable, and the most likely causative factor was the environment in which they lived. By this time the first inquiries into the condition of children working in factories had revealed conditions which had prompted questions and demands for legislation and for further investigations. Demands for limits on working hours and restrictions on the ages at which children might be employed raised a range of questions: the practical, such as how one might tell the age of a child at a time before the systematic registration of births; and the philosophical or political, such as whether its welfare was the responsibility of its family or of the government. Children became the subject of increasing scrutiny, both literal

and figurative, and some people, such as the factory inspector Lionel Horner, began to express ideas about children having rights of their own.

From examining working conditions the scrutiny moved to the towns, and to housing conditions. Again, mortality figures, now calculated in the form of excess infant deaths, proved striking: the very concept of excess deaths was a novel statistical departure, suggesting that something could and should be done to prevent them. It was noted that ten times or more as many families in Preston enrolled in the burial clubs as in the sick clubs – it could be argued that the hope of making some money from their child's death was that much greater than that of saving them from sickness. It was reports such as these which moved Charles West to talk about the burden which caring for a sick child placed on a family, such that its death might come as a relief, while in Edinburgh the Dean of the Faculty of Advocates would speak of the starvation a family might face if a mother gave up work to care for her sick child.

The new understanding of the nature and causes of disease had a particular impact on the attitudes of medical professionals towards children, in that it helped create the possibility for them to receive medical attention. There were two main reasons that young children had traditionally been excluded from receiving medical (as opposed to surgical) care. Firstly, the commonest cause of death was from infectious diseases, which, given the opportunity, would spread rapidly, and were untreatable. The death would do the doctor's reputation no good, so he was most likely to recommend isolating the child and to move on. The second reason was that, until the mid-nineteenth century, medical methodology relied upon patient testimony, and young children were considered incapable of giving a reliable or accurate account of themselves. Physicians therefore avoided them. In the 1830s and 1840s, however, younger physicians began to experiment with a range of new diagnostic approaches, many of which had already been more enthusiastically adopted on the Continent. Some, such as percussion and auscultation, simply relied on a practitioner gaining experience, but the observation and classification of large numbers of patients had not

only enabled physicians to develop a standardised pathological nosology around the concept of the lesion, but had also led to the creation of the idea of the normal or healthy patient against which the clinical subject might be assessed in terms, for example, of their rate of breathing and pulse. It was thus during this period that the first serious efforts were being made at developing objective methods of diagnosis, ones which could be used on the unconscious or immature patient.

Not only did the new conceptual framework support the case for greater intervention in child health in general, and for the creation of specialist hospitals in particular, the more systematic use of evidence also helped to demolish social and political arguments against such moves. James Roberton had shown in Manchester that there was a widespread need for the lying-in charity, and that it did not draw in the feckless as some had suggested. More powerfully, statistics had also been used to demolish Malthus' argument that by saving the children of the poor, charity simply created more mouths to feed and increased the numbers of the poor.

The emergence of this new framework helps to explain the timing of the creation of the new institutions, and the reason why, after decades of conspicuous inactivity in the field, there was a surge of new hospitals being opened in a period of less than a decade. The new view of childhood was coming at a time, the 1830s and thereafter, when the failure of medicine to cope with epidemic cholera and typhus was calling into question the whole basis of medical practice, although demands for reform extended far beyond the bedside and the hospital. The passing of the Liverpool Sanitary Act as a private bill in 1846 was followed by the 1848 Public Health Act as government legislation. Following the opening of a small hospital in Liverpool in 1851, the first really pioneering institution of this kind in Britain opened at Great Ormond Street in 1852, by which time a substantial body of public opinion was demanding it and the medical profession had the intellectual tools to make it work.

The crisis of confidence in established medicine meant that it would not be enough to replicate the existing therapeutic model as practised in voluntary hospitals. The

established historiography suggests that children's hospitals were simply one more variety of specialist hospital, established by medical entrepreneurs seeking new niche opportunities in the medical marketplace in which to claim expertise and establish their careers. However, in order to attract custom to such an institution, an entrepreneur would have to claim a level of skill which surpassed the competition, and yet many proponents of children's hospitals gave as their reason the fact that knowledge in this area was so lacking; this was hardly a good business case. The language of the founders of the Edinburgh hospital says something very different; there is certainly an element of self-interest, but it is the self-interest not of the professional but of the citizen who wishes to establish tolerable living conditions in their surroundings. Above all, though, it is a profoundly moral message: the people involved have been made aware that there is a crisis of morbidity and mortality among the children of Edinburgh's poorest classes, and that this is remediable; they believe that it is their Christian duty to act to ameliorate this crisis. This runs in contradistinction to Seidler's suggestion that children were viewed as social resources; here is evidence not of the State taking an interest but, on the contrary, of a morally-inspired mission to address the failings of an absent State.

Six hospitals have been considered, all reflecting circumstances of the cities in which they were located and the dominant personalities involved in their foundation. It is clear both from comparisons within Britain and by looking abroad that there were at this time a number of possible models that someone wishing to establish a children's hospital might follow, but it would seem equally clear that, in Britain at least, the public health movement played a large part in preparing wider society to receive such institutions and in shaping at least three of them. Alongside the great socio-economic forces represented by industrialisation, urbanisation, and public health reform are the ambitions and interests of individual reformers. Charles West had somehow established a European reputation as an authority on children's hospitals long before the foundation of GOSH, and he had a clarity of purpose which comes across in his

writings. August Schoepf Merei and James Whitehead had a firm if narrower vision, although Merei's early death prevents us from knowing just how this might have developed. Hügel described an Austrian model whereby the children's hospital was closely aligned with the University medical school and leading physicians were appointed to academic posts; this was certainly Merei's own experience, and Whitehead had teaching experience in Manchester; the comparatively theoretical or academic nature of their research and publications suggests that they might have been moving in this direction. Louis Borchardt, on the other hand, appears to have been an efficient administrator rather than a visionary leader, both in Prussia and then again in Manchester. This is consistent with the evidence from North Germany of child health services as a branch of social care provision. Oehme underlines this distinction between the North German and Austrian approaches. Each of their hospitals took on a distinctive form which at least in part reflected the dominant personalities involved. The Jenny Lind Hospital was a different matter, coming into being almost by accident: a donation that came about by good fortune, four years spent deciding how to spend it, just as children's hospitals were hitting the headlines. Norwich got its hospital, which appears to have done a perfectly adequate job without achieving anything out of the ordinary. Alfred Stephens, in Liverpool, is the example which goes to prove Mauthner's warning that you should not start a children's hospital if you hope to get rich.

The distinguishing feature of the new hospitals lay above all in their therapeutic philosophy. If statistics had been used to demonstrate the environmental origin of much morbidity and mortality, it was with environmental methods that the children's best hopes lay. Public health reform is traditionally associated with removing 'nuisances' such as sewage and other waste, ensuring the provision of clean water and adequate ventilation, and making other environmental improvements such as better housing. Charles West recognised that it was not always possible to change the conditions which had made the children sick, but that it might be possible to offer some respite – in other words, if he could not remove the nuisances from the children, then

he should remove the children from the nuisances. This approach represented a profound philosophical change, and one which was achieved with varying levels of success, but the experience of West and others in trying to bring about change in existing hospitals had convinced them that a fresh start was needed. This was, moreover, not just a matter of providing a clean environment: the new hospitals were distinguished by being founded on the premise that young children were qualitatively different from older children and adults, that they responded differently to disease, and that both their health and their care needs had to be met in distinctive ways which acknowledged this difference. There was also a recognition that this new approach was in its infancy, and that specialist hospitals would provide institutional foundations for the systematic study of child health.

The new approach was explicit in the missions of both GOSH and the Edinburgh Hospital. The environmental model of treatment within a hospital is possibly the least-recognised part of the work of children's hospitals during this period. This was a time of crisis for the medical profession; the medical literature reflects the confusion, particularly where the treatment of children is concerned. There had been a widespread loss of faith in the profession among the public following the failure to confront successfully epidemics of typhus and cholera, and even those physicians who were pursuing new methods were forced to admit that they had not led to any therapeutic breakthroughs. Some hospitals, such as the Jenny Lind and the Liverpool Children's Infirmary, continued to hand out the same medicines as in previous years, but the medical press contains no reports of any significant progress. The innovators were in London and Edinburgh, where children were treated with kindness and given time to recover while there was at least some aspiration to teach the parents how to keep them healthy in the future. The Clinical Hospital at Cheetham Hill Road in Manchester, meanwhile, was taking a step further by attempting to compile growth and development norms and to establish the best ways of raising healthy children so as to

be able to advise parents and nurses how to prevent their charges from becoming sick in the first place.

This was the most idealistic, and also the weakest, part of the programme. All six of the hospitals included an educational component in their aims. Some, such as the Liverpool Children's Infirmary and possibly the Manchester Hospital and Dispensary, appear to have done little but pay it lip service. In Cheetham Hill Road, Great Ormond Street, and Edinburgh, it appears to have been a genuine intention, and why it failed is not clear, as nothing about the failure is apparent in the records. It could simply be that there was too much else to do, but there is also the political context to be borne in mind: while it was relatively easy to unite people around a charitable effort to help young children there remained deep political divisions around the whole question as to how far it was right to intervene in family life and to displace the role of the head of the household. It could be that this was simply too contentious an issue to pursue. Nevertheless, even if circumstances prevented them from achieving it, this intention to prevent, rather than merely to treat, ill-health, distinguishes children's hospitals from other specialist hospitals.

Seidler suggests that physicians' interest in developing new institutions as loci for investigation and teaching concerning children's diseases coincided with a new view of childhood spreading through parts of educated society, reflecting a rising concern for children and a growing awareness of their value as social assets rather than family property. This might be true up to a point, but it underestimates the significance of the demand for public health reform during its period, and the extent to which children's hospitals might be regarded as a clinical manifestation of this movement. The contribution made by statistics to the case for children's hospitals is clear, whether in childcare manuals after about 1840, in the medical press, and in pamphlets arguing for specific institutions. The case has been made in this thesis that timing and, to a significant extent, the character of the first British children's hospitals can be explained by examining the rise of the public health movement, which influenced their

development in three principal ways: the statistical movement, which provided the evidence base; the environmental health model, which provided a medical methodology; and the preventative approach, to which all subscribed but which proved to be their weakest attribute.

The hospital for which the best evidence survives is GOSH; that with the least is Liverpool Children's Infirmary. There is undoubtedly scope for further research to be done in trying to track down further information concerning the origins of all these institutions and the people associated with their creation, although in some cases there might be thin pickings. A more fruitful and very under-explored area might be the link with the history of children's hospitals on the Continent, and in the German-speaking world in particular. Very little has been published about this in German or in English, and the Austrians made considerable progress in terms of funding University chairs and academic journals in the 1830s and 1840s which would merit investigation.

These hospitals represent a phase in child health which has to some extent been forgotten, having been overshadowed by more glamorous developments in surgery, diagnostics, and medical therapeutics which succeeded it. This is a point which is missed by most historical writing about children's hospitals; the assumption, spoken or not, tends to be that children went to hospital to be 'treated', without specifying what is meant by that, when it is known that treatment at that time was a very haphazard matter indeed. The point made by this investigation is that children's hospitals were a response to a crisis in morbidity and mortality among young children using the most effective methods which were available at the time – not allopathic therapeutics, but environmental management (manipulating the environment rather than the patient's body) and health education, or what might otherwise be regarded as part of the spectrum of public health methods.

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