Some effects of housing on health. Alan Macfarlane

It was not until the end of the nineteenth century that, thanks to the microscope, people could see the bacteria, viruses and tubercles which explained why it was that altering the arrangements of the house could have such dramatic effects on health. Yet there had long been aware here of the importance of good housing. The most widely read English doctor of the eighteenth century, Buchan, gave his public much sound advice on the necessity for high standards in the house. He started by pointing out that 'Proper attention to air and cleanliness would tend more to preserve the health of mankind, than all the endeavours of the faculty.'[1] The 'faculty' were, of course, his fellow doctors and this remark shows an awareness of the importance of environmental health. His major concern was with ventilation. 'In places where great numbers of people are collected, cleanliness becomes of the utmost importance. It is well known that infectious diseases are communicated by tainted air. Everything, therefore, which tends to pollute the air, or spread infection, ought with the utmost care to be guarded against.'[2] People were not generally aware of how important this was. 'Unwholesome air is a very common cause of diseases. Few are aware of the danger arising from it. People generally pay some attention to what they eat and drink, but seldom regard what goes into the lungs, though the latter proves often more suddenly fatal than the former.'[3] Hence, 'In all place, where vast numbers of people are crowded together, ventilation becomes absolutely necessary.'[4]

The dangers and consequence would be felt by the urban poor in particular. 'Nor are many of the holes, for we cannot call them houses, possessed by the poor in great towns, much better than jails. These low dirty habitations are the very lurking-places of bad air and contagious diseases. Such as live in them seldom enjoy good health; and their children commonly die young.'[5] Yet there were also dangers for the comfortably off. 'The various methods which luxury has invented to make houses close and warm, contribute not a little to render them unwholesome. No house can be wholesome unless the air has a free passage through it. For which reason houses ought daily to be ventilated, by opening opposite windows, and admitting a current of fresh air into every room.'[6] This need for ventilation

[1] Buchan, Domestic, p.79

[2] Buchan, Domestic, p.101

[3] Buchan, Domestic, 75

[4] Buchan, Domestic, p.78

[5] Buchan, Domestic, p.77

[6] Buchan, Domestic, p.77

applied to all aspects of domestic life, for instance to bedding. 'Beds, instead of being made up as soon as people rise out of them, ought to be turned down, and exposed to the fresh air from the open windows through the day.'[7]

Another who saw the virtues of good ventilation was Benjamin Franklin. He noted that 'A constant circulation of fresh air is so necessary, so important in fevers and in all feverish disorders, that it ought to be particularly considered in the construction of houses.'[8] It was because of this that the less well constructed houses of the poor were often healthier than those of the rich. 'In these houses the rooms are spacious, cold as ice, where the air plays freely around, with doors and windows that do not half shut. The inhabitants of these shattered houses are pitied; and yet the very circumstance of their being out of repair, is what contributes to the health of those who live in them, and facilitates their cure when diseases reign.'[9]

Moving a century later, we find Chadwick re-discovering the views put forward by Buchan and Franklin and again laying great stress on ventilation. 'Of that which in these instances appear to be the main cause of premature disease and death, defective ventilation, it is to be remarked that until very lately little had been observed or understood, even by professional men or men of science.'[10] As attention began to be drawn to this subject, it became more and more obvious that many deaths which had been attributed to other causes were in fact the result of crowded and badly ventilated houses. 'Accordingly, since the attention of medical men has been sufficiently directed to the subject, the explanation has become complete of many deplorable cases of general ill health and mortality in such places, attributed at first to deficiency or bad quality of food, or to any cause but the true one - want of ventilation.'[11] This was particularly important, Chadwick believed, in the case of the disease which caused the largest number of adult deaths, tuberculosis and other respiratory diseases lumped under the term 'consumption'. 'The effects of bad ventilation, it need not be pointed out, are chiefly manifested in consumption, the disease by which the greatest slaughter is committed.'[12]

[7] Buchan, Domestic, p.77

[8] Franklin, Writings, 6, p.314

[9] Franklin, Writings, 6, 315

[10] Chadwick, Report, p.173-74

[11] Chadwick, Report, p.187

[12] Chadwick, Report, p.174

Chadwick cited a large amount of data to show the effects of just a simple change in household ventilation. Firstly, he found, like Franklin, that draughty shacks were often healthier than more substantial, wind-proof houses. 'In the rural districts the very defects of the cottages which let in the fresh air, in spite of all the efforts of the inmates to exclude it, often obviate the effects of the overcrowding and defective ventilation. It has been observed, that while the labouring population of several districts have had no shelter but huts, similar to those described by Dr. Gilly, as the habitations of the border peasantry, which afforded a free passage for currents of air, they were not subject to fevers, though they were to rheumatism.'[13] The second concerned the improvements in hospital mortality, which he believed were due to improvements including ventilation. 'The earliest statement which we possess of the mortality of our hospitals is in Sir William Petty's work on Political Arithmetic, from which it appears, that in the year 1685 the proportion of the deaths to the cures in St. Bartholomew's and St. Thomas's hospitals was about 1 to 7. The annual printed report of St. Thomas's hospital for 1689 is still preserved; the mortality St. Thomas's became still smaller, it was 1 in 14. About the year 1783, some improvements were made with respect to cleanliness and ventilation, and during the ten subsequent years the annual deaths were accordingly still fewer than before, less than 1 in 15. During the ten years intervening between 1803 and 1813 the improvement continued, and the proportion fell to only 1 in 16. The average during the 50 years from 1764 to 1813 was remarkably small, only 1 in 15.'[14]

The problem of ventilation was not just a question of the flow of air, but also the dampness of the air, which was in turn affected by internal and external drainage. Chadwick noted that 'as in most cases, the internal economy of the houses were primarily affected by the defective internal and surrounding drainage that produced the damp and wet, and thence the dirt against which the inmates had ceased to contend.'[15] Dampness caused dirt and mould, and hence further encouraged disease. All these factors combined in the horrific underground homes of the poor in industrial cities. 'More filth, worse physical suffering and moral disorder than Howard describes as affecting the prisoners, are to be found amongst the cellar population of the working people of Liverpool, Manchester or Leeds, and in large portions of the metropolis.'[16] It was thus evident that by improving the housing, the health of the people would greatly benefit. This could be seen in many parts of the country, for instance in the case of Bath, whose comfortable Regency houses had a dramatic effect on health. 'Whether we compare one part of Bath with another or Bath with other towns, we find health rising in proportion to the improvement of the

[13] Chadwick, Report, p.196

[14] Chadwick, Report, p.175

[15] Chadwick, Report, p.196

[16] Chadwick, Report, p.277

residences.'[17]

[17] Chadwick, Report, p.236