

CLOTHING.

What one wears, how one wears it, and how often it is washed has a significant effect on health. An obvious connection is through the prevalence of fleas, lice, mites and other disease vectors, but there are other probable effects. How far then, and in what ways did the English and Japanese solve the contradiction innate in all clothing, which is 'to combine sufficient protection with adequate ventilation?'¹

Clothing in England.

Many observers noted over the centuries that the English, along with the Dutch, were the best and most richly clothed people in Europe. Among the reasons for this were a general affluence, the spread of wealth across the population, an obsession with fashion and the availability of cloth in a wool-producing country. Fortescue in the fifteenth century noted that the French peasantry among whom he was living had miserable clothes. 'Their shamewes (gown cut in the middle) are made of hemp, much like to sack cloth. Woollen clothes they wear none, except it be very coarse, and that only in their coats under their said upper garments. Neither use they any hosen, but from the knee upwards: the residue of their legs go naked. Their women go bare foot saving on holy days.' On the other hand, English country people of a comparable level 'wear fine woollen cloth in all their apparel. They also have abundance of bed coverings in their houses, and of all other woollen stuff.'² In the sixteenth century, Aylmer compared the affluent English to the Italian peasants. There 'the best coat he weareth is sacking, his nether stocks of his hose, be his own skin...'³ In the seventeenth century, after travelling over most of Europe, Fynes Moryson thought the 'English on their apparel are become more light than the lightest French, and more sumptuous than the proudest Russian.'⁴ In the eighteenth century, Arthur Young estimated that the labouring class of France were '76 percent worse...clothed...than the same classes in England.'⁵ Henry Meister at the end of the century also noted that 'the English labourer is better dressed...than the French.'⁶ Rochefoucauld in 1784 'observed that all classes of people - peasants from

¹ Lane-Claypon, *Hygiene*, p.90

² *Commendation*, 81-81v, 85-85v

³ Reynolds, *British Pamph.* p.29-33

⁴ *Itinerary*, 4, p.231

⁵ Malthus, *Population*, p.230

⁶ Quoted in Marshall, *People*, p.160

the neighbouring country, servants even - were well clad and remarkably clean.⁷

It was not just a chauvinistic conceit that the English were well dressed. The Venetian Ambassador wrote in 1497 that the English 'all from time immemorial wear very fine clothes.'⁸ Van Meteren from Antwerp described in the sixteenth century how 'The English dress in elegant, light and costly garments, but they are very inconstant and desirous of novelties, changing their fashions every year, both men and women. When they go abroad or riding or travelling, they don their best clothes, contrary to the practice of other nations...'⁹ The profligate display was noticed at the same time by a German visitor, who found that in London 'they go dressed out in exceedingly fine clothes...to such a degree indeed, that, as I am informed, many a one does not hesitate to wear velvet in the streets.'¹⁰

The luxurious clothing in medieval England is suggested by the numerous acts of parliament. Doubleday gives a summary of some of ten statutes passed between the reign of Edward III (1327-1377) and Elizabeth I (1559-1603) regulating luxury of apparel. For instance, 'In the third year of Edward III chapter iv., is an Act against luxury in apparel. It limits the wearing of furs to persons of a certain rank, and in certain offices. In the thirty-seventh year of the same king's reign, was passed another long Act, of many distinct sections of chapters, regulating dress from that of the gentleman down to that of the day-labourer. In year iii. of Edward the Fourth, (1463) chapter v., a similar statute was enacted, and in the fifth year of the same reign, chapter xiii., another statute to prohibit gilding, and wearing gold and silver lace, except by certain ranks, and this at a period when gold and silver were twenty times their present value!' As Doubleday comments, 'That this wonderful amount of wealth and comfort, distributed throughout an entire people, had been of long growth, seems not to be doubtful.'¹¹ In an act of 1363, 'tradesmen and artificers, being mastermen, are allowed to wear fine woollen cloth, as high as **one shilling and sixpence the yard**. Ploughmen, hinds, pig-drivers, and others are limited not to wear cloth of a greater price than **one shilling** the yard. Now, as in the reign of Edward the Third, it is certain that money was of nearly twenty times its present value, this is equivalent to prohibiting tradesmen and artizans from wearing cloth, if at or about the price of **thirty shillings the yard**, and labourers from

⁷Rouchefoucauld, Frenchman, p.4.

⁸ Rye, Foreigners, p.22

⁹ Rye, Foreigners, p.70-71

¹⁰ Rye, Foreigners, p.7-8

¹¹Doubleday, Population, p.165.

wearing it if it cost more than **eighteen or twenty shillings the yard** - a prohibition at which both tradesmen and labouring men of the present day would stare!¹² If we take the story forward from 1847, when Doubleday wrote, we would be talking of a prohibition in cloth costing many pounds per yard, beyond the pockets of most supposedly affluent citizens today.

The quality of English clothing was described by De Saussure in the 1720s. Speaking of the merchant level in London, he wrote that 'Englishmen are usually very plainly dressed, they scarcely ever wear gold on their clothes; they wear little coats called 'frocks', without facings and without pleats, with a short cape above...Their cloth and linen are of the best and finest...'¹³ As for the women, they were even better dressed. 'They pride themselves on their neatly shod feet, on their fine linen, and on their gowns, which are made according to the season either of rich silk or of cotton from the Indies. Very few women wear woollen gowns. Even servant-maids wear silks on Sundays and holidays, when they are almost as well dressed as their mistresses.'¹⁴ Linens and silks were worn extensively and shoes were universal. This was not confined to the wealthy. 'The lower classes are usually well dressed, wearing good cloth and linen. You never see wooden shoes in England, and the poorest individuals never go with naked feet.'¹⁵ The question of bare feet was a particular index of relative wealth. Braudel writes of early modern Europe that 'Usually all went barefoot, or almost so...'¹⁶ The absence of shoes among the poorer Scots was noted by a number of observers.¹⁷ The English had good solid shoes, no doubt partly because of their pastoral agriculture, which made leather widely available.

It would not be difficult to provide a description of the reasonably diverse and costly clothing of each of the social strata of the English from the sixteenth century onwards. The excesses of the more affluent were castigated by Philip Stubbes, who complained in the sixteenth century that even those who were below the rank of yeomen 'go daily in silkes, velvettes, satens, damaskes, taffaties, and suche like.'¹⁸ He

¹²Doubleday, *Population*, pp.166-7.

¹³ De Saussure, *Foreign*, p.112-3

¹⁴ De Saussure, *Foreign*, p.204

¹⁵ De Saussure, *Foreign*, p.133

¹⁶ Braudel, *Capitalism*, p.227

¹⁷ Graham, *Scotland in C18*, p.15; Wright, *Autobiography*, p.80

¹⁸ Stubbes, *Anatomy*, p.17

thought that all other countries in the world were 'faire behind' England in apparel, and 'No people so curious in newe fangles as they of Ailgna.'¹⁹ With angry and somewhat exaggerated rhetoric he complained that in England 'Every pesant hath his stately bandes and monstrous ruffes, how costly soever they bee.'²⁰ He then proceeded to describe the expensive and luxurious shirts, doublets, hoses, coats and other items worn by the English males. The women's clothing was equally luxurious and sinful.²¹ Others joined in complaining about the extravagant clothing in the mid-sixteenth century.²² The complaints continued through the centuries. More recently, social and economic historians have described the ample clothing not only of the wealthy, but of yeomen, husbandmen and labourers in the sixteenth and seventeenth centuries.²³

The generalized affluence, love of novelty and availability of wool and leather provided a background where good clothes and shoes could be obtained. Yet the effervescence of Elizabethan and medieval clothing which Stubbes and others described became tempered by two considerations, virtue and health. There was a rising tide of simplicity and temperance. That peculiar 'embarrassment of riches' which caused the Dutch to wear extremely simple but extremely costly black and white clothing, as described by Schama,(REF) also affected England. From the Protestant sects of the sixteenth century, through the seventeenth century Puritans, there was always an element of reserve and a pressure towards solid simplicity. This blend of affluence and simplicity was noted, for instance, by De Saussure. 'Quakers' clothes, though of the simplest and plainest cut, are of excellent quality; their hats, clothes and linen are of the finest, and so are the silken tissues the women wear.'²⁴

It is a combination well suited for healthful clothing. The eighteenth century doctor Buchan noted that good clothing was essential for health. He wrote that 'The continual discharge from our bodies by perspiration, renders frequent change of apparel necessary. Changing apparel greatly promotes the secretion from the skin, so necessary for health. When that matter which ought to be carried off by

¹⁹ Stubbes, *Anatomy*, p.17

²⁰ Stubbes, *Anatomy*, p.41

²¹ Stubbes, *Anatomy*, p.42ff

²² Lamard (ed) *Discourse*, p.82

²³ cf Campbell, *English Yeoman*, p.251ff; Hoskins, *Leicestershire Essays*, p.112ff; Everitt, *Labourers*, p.450

²⁴ De Saussure, *Foreign*, p. 324

perspiration, is either retained in the body, or resorbed from dirty clothes, it must occasion diseases.²⁵ As for the kind of clothing that was most healthful 'Were we to recommend any particular pattern for dress, it would be that which is worn by the people called Quakers. They are always neat, clean, and often elegant, without any thing superfluous.'²⁶

What is most important of all concerns what the clothes are made of and how they were made. Here we can observe two developments which may have considerably improved the previously reasonable clothing of the English. The first of these occurred in the sixteenth century. Like other health-giving changes, the innovation came from the Netherlands. Medieval English woollen cloth had, of course, been widely known as amongst the finest in the world. Yet it was rather heavy and thick. In the sixteenth century new methods of cloth-making were imported the much lighter 'bays and says' of Flanders and Holland. There was a rapid development - with much exporting of the new cloths. This has been widely noted.²⁷ The possible health consequences of a new, lighter, stronger and more washable cloth have not been so widely analysed. The coincidence with the period when some flea and lice born illness began to decline in England, from the middle of the sixteenth century, is worth exploring. It may well be that the popularity of these new lighter cloths was not merely due to the fact that they were stronger, cheaper, more pleasant to wear, particularly when doing manual labour and in hot climates. Their rate of absorption of dirt, the discouragement they offered to fleas, lice and insects, and hence their general health potential may also have been an important consideration. Not least among the improvements in the standard of living of the English, and through their very rapidly expanding export trades of many other Europeans, may have been the clothing revolution of the sixteenth century. England was fortunate to have the wealth and the imported technology to produce cheap and good cloth and to be able to import other materials as needed. The combination of the lighter woollen cloths with linen and silk may have given England, along with Holland, advantages from early on.

Cotton manufacture reached England in the later sixteenth century with the same Dutch and Walloon immigrants who brought the lighter woollen cloth techniques. By 1600 fustian (a mixture of wool and cotton) weaving was established in Lancashire around Bolton and Manchester. Yet it was during the eighteenth century that the improvements in the mechanization of cotton manufacturing through the carding machine, 'spinning jenny', fly-shuttle, spinning frame and 'mule' revolutionized the cost and quantity of cotton cloth.²⁸ From the 1730's 'cotton grew at a rate never before witnessed in textiles, and

²⁵ Buchan, *Domestic*, p.100

²⁶ Buchan, *Domestic*, p.93

²⁷ For example Nef, Ramsey, De Mann et al

²⁸ cf Marshall, *People*, p.177-8

is regarded as the quintessential growth industry of the early stages of the Industrial Revolution.²⁹ Some of the reasons for this sudden immense burst of production are summarized by Mokyr. 'Cotton combined qualities that are attractive to both consumers and producers; it takes dyes well, launders easily, and ventilates much better than linen and wool. Compared to its main competitors, wool and linen, cotton fibres lent themselves easily to mechanization, Moreover, the supply of the raw material was elastic.³⁰ The price dropped and dropped. For instance, between 1780 and 1850, the real price of cotton cloth dropped by 85 per cent.³¹ The major period of growth was between about 1770 and the 1840s when, for example, output in 1770 was just 0.8 percent of its 1841 level.³²

What particularly concerns us here is the effect of this new cloth on health. Three features can be noted. Cotton can and should be boiled frequently. 'Cotton absorbs odours and requires even more frequent washing than wool.'³³ Washing does not destroy cotton fibres or shrink it, in contrast to wool. This arises from a fundamental difference in the fibres. 'All material consists of fibres; these are smooth outside and hollow inside in the case of cotton and linen, while the wool fibre is solid in structure and its outside scaly...'³⁴ The lice and fleas which cause so much human illness, particularly typhus, not only find it more difficult to maintain their hold on cotton but the regular washing destroys them.

When Chambers was trying to account for the drop in mortality in Nottingham from the 1770s, no factor could explain it except the fact that 'Nottingham, of course, was a cotton town, the first in fact.' He noted that 'By the end of the century cotton hosiery, underwear, calicoes, bed-hangings and sheets would be ousting those of wool; and cotton can be boiled, which is fatal for the typhus louse. The change to cotton would be especially beneficial to the poor of the large towns.'³⁵

The way in which this worked was described by Place in 1824 when he described a tour of inspection

²⁹ Mokyr, *Lever*, p.100

³⁰ Mokyr, *Lever*, p.100

³¹ *ibid*, p.111

³² Mokyr (ed), *Industrial*, p.180.

³³ Lane-Claypon, *Hygiene*, p.95

³⁴ Lane-Claypon, *Hygiene*, p.91

³⁵ Chambers, *Economy*, p.104

through the poorest parts of London. 'I carefully observed the children and can safely say they are equal in every respect and in many respects superior to the children of tradesmen in much more wealthy districts...within my memory. Although it was Friday, the children were clean and healthy. The children of tradesmen....keeping good houses in the Strand for instance...all of them when I was a boy had lice in their hair. The children I examined today do not seem to be at all troubled with these vermin. In many of the narrow alleys there were numbers of very poor children, but even these were cleanly compared with former times. Few were so wretchedly clothed or so filthy as numbers used to be. Many carried with them some mark of the wish of their poor parents to do their best for them, a clean rag of a shirt, or a frock, or some such thing was common among them.'³⁶ Dorothy Marshall in quoting this commented that 'Much of the improvement he ascribes to the cheapness of cotton for garments and bed-hangings and the ease with which they could be washed.' Marshall notes that Place 'found out the prices of these things in the shops of East London: stays, 3s.6d. and 2s.6d. a pair, printed cotton from 4d to 2s. a yard, white cotton stockings from 11d. upwards; rugs, counterpanes and blankets were correspondingly cheap.' 'These prices', Place says, 'show the facility with which the working people who have any means at all may provide themselves.'

Marshall quotes further passages to support the view that cotton was immensely important; '...the wives of journeymen, tradesmen and shopkeepers either wore leather stays, or what were called full-boned stays...These were never washed although worn day by day for years. The wives and grown daughters of tradesmen, and gentlemen even, wore petticoats of camblet, lined with dyed linen, stuffed with wool and horsehair and quilted, these were also worn day by day till they were rotten.' Marshall then quotes a further passage to show that 'A great change was produced by improvement in the manufacture of cotton goods.' Place observed that 'These were found to be less expensive and as it was necessary to wash them, cleanliness followed almost as a matter of course...This very material change was not confined to the better sort of the people as they were called...it descended, although rather slowly, to the very meanest of people, all of whom so far as respects females, wear washing clothes. Cleanliness in matters of dress was necessarily accompanied by cleanliness in other particulars...'³⁷ Thus all over the country in the period between 1700 and 1821, Place thought that the working classes were 'infinitely...more cleanly in their persons and their dwellings...partly from the success of the common manufacture...'³⁸

The Chambers thesis is supported by Blane as well as Place in the early nineteenth century. He noted that among important causes of improved health was 'the use of linen and soap' and notes that 'The

³⁶ Quoted in Marshall, London, p.71

³⁷ Marshall, London, p.72

³⁸ Quoted in Marshall, London, p.72

frequent change of body-linen was not in common use till the eighteenth century.³⁹ It has been given the backing of several recent authors. E.L. Jones takes as an illustration of almost invisible, but highly important, changes, 'the introduction of cheap cotton underclothing, replacing the body linen used by the wealthy and giving something new to the working classes. In a world of primitive and collective toilet and washing facilities, the greatest endemic threat to health was gastrointestinal infection, easily passed by unwashed hands that had come into contact with body wastes. The lack of easily cleaned undergarments was an invitation to skin irritation, scratching, and thus transfer of pathogens from body to hands to food to digestive tract. The new underclothing, in combination with new and cheaper soaps, probably did as...'⁴⁰ Likewise, in trying to explain the decline of typhus, Landers comments that 'the classical explanation offered by Chambers...retains much of its validity, even though we still do not know the precise details concerning frequency of boiling et.'⁴¹ Two comments are worth making at this point. Firstly that the growth of cotton manufacture mainly helps to explain changes after the 1780s; the drop in mortality from the 1740s, or before cannot be explained by it. Secondly, that in certain respects, particularly in warmth and comfort, cotton is often a step backwards. It may be both healthier and less comfortable. For instance, it has been pointed out that 'Wool is the best material for underclothing; it conducts heat badly, and while absorbing moisture readily, gives it off slowly, so that far less cooling is produced by evaporation from the woollen garment than from any other.'⁴² As with tea, this helps to explain part of the paradox whereby people may similarly have a lowered standard of living in certain respects ('worse' nutrition or clothing) and yet become healthier. The whole debate about height and weight decreases and increases has to be taken in such a context.

We can thus see another instance in which there are complex connexions between health, wealth and technology. A relatively wealthy, well fed and clothed population was able to maintain and even improve its clothing just as population rapidly increased and the dirt and crowding of urban and industrial changes might have been expected to worsen general health dramatically. It did so through the famous mechanical inventions of the first industrial revolution, based as they were on a long and complex growth of technical knowledge, as well as the application of the new source of power, coal-fired steam. As we shall see, these advances in Europe were only enough to bring England up to a standard long enjoyed in Japan.

³⁹Blane, *Dissertations*, p.126.

⁴⁰Jones in Mokyr (ed.), Industrial Revolution, p.161 note 25 - unfortunately the note is unfinished through a printing error.

⁴¹Chambers, *Death*, p.356.

⁴²Notter and Firth, *Hygiene*, p.252.

There is one other area where there may have been significant improvements, namely in bedding. Harrison provides an account of what his congregation thought was a major revolution in the standards of living during the sixteenth century. This was 'the great (although not general) amendment of lodging, for (said they) our fathers, yea, and we ourselves also, have lien full oft upon straw pallets, on rough mats covered only with a sheet, under coverlets made of dagswain or hap-harlots (I use their own terms) and a good round log under their heads instead of a bolster or pillow. If it were so that our fathers or the goodman of the house had within seven years after his marriage purchased a mattress or flock-bed and thereto a sack of chaff to rest his head upon, he thought himself to be as well lodged as the lord of the town, that per adventure lay seldom in a bed of down or whole feathers, so well were they contented and with such base kind of furniture...Pillows (said they) were thought meet only for women in childbed. As for servants, if they had any sheet above them it was well, for seldom had they any under their bodies to keep them from the pricking straws that ran oft through the canvas of the pallet and raised their hardened hides.'⁴³ As Shammass shows, there was a very large expenditure on bedding in the sixteenth century and indeed she terms this 'the age of the bed'.⁴⁴ The use of cotton from the middle of the eighteenth century may again have been important here. It would replace the heavier woollen and flock coverings and lessen the shelter for fleas and other insects.

Clothing in Japan.

Until the end of the sixteenth century the major form of cloth worn by the Japanese people was linen made from hemp.⁴⁵ 'Cotton was grown hardly anywhere in Japan until the early Tokugawa period, when it began to replace hemp in the clothing of the commoners.'⁴⁶ Once the change over from hemp to cotton had begun, the transformation was swift, it 'proceeded rapidly owing to cotton's greater warmth, softness, durability, and cheapness, and it was all but complete by the end of the seventeenth century.'⁴⁷ Cotton had been introduced from Korea by the daimyo and after the unification of Japan its growth and manufacture increased dramatically. For instance, 'As the volume of exports expanded thereafter, cotton cultivation and commercial ginning, spinning, and weaving spread from Oshima and Kumage (Kaminoseki) counties, where they had first appeared, over the whole domain except for a district along

⁴³ Harrison, Description, p.201

⁴⁴Shammass, Consumer (xerox), p.169 and table 6:3.

⁴⁵Yamamura, Cambridge, 3, p.313

⁴⁶ Smith, Sources, p.74

⁴⁷ Smith, Sources, p.74

the Japan Sea.⁴⁸ By the 1700s, forty to fifty percent of the land around Osaka was growing cotton.⁴⁹ Not only did this have a dramatic effect, alongside silk manufacture, on the future industrial development of Japan, but it probably had a significant effect on hygiene and hence on health. As Hanley observes, cotton may well have had a considerable impact 'in terms of making life more comfortable, and more hygienic - possibly even helping lower mortality...'⁵⁰ Silk, meanwhile, remained the preferred cloth of the rich. The absence of wool is indicated by Morse's remark that 'The Japanese women are much interested in our woollen fabrics, their cloth being cotton, linen, and silk, and the weave simple.'⁵¹ Cotton was dominant and many observers noted the widespread weaving: 'the women are busy weaving cotton cloth in narrow breadths on rude looms.'⁵²

It is difficult to estimate the frequency of the washing of cotton. Some observers thought that it was not washed enough. The extreme case was put by Isabella Bird who was particularly critical of the dirty and unwashed clothing in some of the villages she visited in the later nineteenth century. Many diseases she thought, 'would never have arisen had cleanliness of clothing...been attended to.' 'The absence of soap, the infrequency with which clothing is washed, and the absence of linen next the skin, cause various cutaneous diseases, which are aggravated by the bites and stings of insects'; 'these people wear no linen, and their clothes, which are seldom washed, are constantly worn, night and day, as long as they will hold together;' there were lots of sick people 'and all, sick and well, in truly "vile raiment" lamentably dirty and swarming with vermin...'⁵³ Similar descriptions could, no doubt, be found for the poor in any European country at the time. Two added points should, however, be made. The first is that clothes **were** washed. Even Isabella herself described how she noticed a stream running down through a village where 'People come back from their work, sit on the planks, take off their muddy clothes and wring them out and bathe their feet in the current.'⁵⁴ The second is that though there was no soap in the western sense, 'For scrubbing the floor or clothes, alkali, obtained by leeching ashes, is put in the

⁴⁸ Smith, Sources, p.75

⁴⁹ Cambs. Hist.iv, p.510

⁵⁰ Cambs. Hist.iv p.689

⁵¹ Morse, i, p.168

⁵² Griffis, Mikado

⁵³ Bird, Tracks, p.198,99

⁵⁴ Bird, Tracks, p.198,99

water.⁵⁵ This would have been perfectly adequate. The third point is that clothes were looked on rather differently in Japan.

In much of the world, clothing is all in one piece, and hence tends to be used and re-used **as a whole**. In Japan, much clothing was made up of a jig-saw of parts. (Ref xxx) When it was washed it was dis-assembled, and then sown up again for use. When parts were worn out they were simply replaced. This process is alluded to in a seventeenth century account. 'Not content with a change of clothes at New Year, Bon, summer, and winter, they buy new dresses for every occasion which offers an excuse, discard them after a brief spell of merciless treatment and use the material as scrap for the sewing box.'⁵⁶ This also indicates the extreme care and attention that was paid by most people to clothing. As Morse observed 'With the exception of China there is probably no country in the world where more thought or care is bestowed upon dress than in Japan. Official rank and station, material and colour, design, form of knot, and other details are rigidly adhered to.'⁵⁷ Hence 'It would take a folio volume elaborately illustrated to do justice to all the peculiarities of all the varieties in Japanese costume.'⁵⁸ The elaborateness of the symbolism of the clothing can be indicated by just one very brief instance - the colour symbolism of age in relation to women's dress.⁵⁹

The amount and consequences of embedded dirt in clothing when people are engaged in gruelling manual work is largely affected by two further considerations. The first is the cut and style of the clothing, the second is what is worn during normal daily activities. In relation to the style, the Japanese seem to have solved the problem of keeping good body ventilation. As the anthropologist Kroeber explained, while much Western dress is fitted, 'Chinese and Japanese dress is also cut and tailored, but it is not fitted. It is cut loose, with ample sleeves, or kimono style, to suggest a broad figure. Trousers are ample, so as to have almost a skirt effect...' For instance, Western clothes emphasise the woman's bust, waist and hip as compared to 'the Japanese **abi sahs** and bow intended to conceal these features...'⁶⁰ The notable looseness of most Japanese dress, suitable for a hot climate, would give plenty

⁵⁵ Griffis, Mikado, p.356

⁵⁶ Sargent, Storehouse, p.98

⁵⁷ Morse, Day i, p.277

⁵⁸ Chamberlain, Things, p.122

⁵⁹ See, for example, Inouye, Home, p.106

⁶⁰ Kroeber, Anthropology, p.332

of body ventilation and allow much of the sweat of labour to dry on the body, rather than on the cotton, and hence to be more easily cleaned off in the bath. As Morse observes, 'simplicity of dress...are characteristic, not only of the more favoured classes, but the possession of the poorest among them.'⁶¹ For example, a doctor described woman's clothing as follows 'upper clothing is...loose, wide and open, and...the chest is for the most part naked, and the thighs and legs are covered only with a thin skirt made of crepe or cotton...'⁶² Children's clothing, in particular, was kept very simple and unostentatious, to the point of niggardliness. Siebold noted for instance, 'The Japanese children are very meanly clad; and, when accompanying their mothers through the streets; their shabby appearance contrasts most strikingly with the parent's splendid attire.'⁶³

For much of the time, and particularly when it was warm or there was hard physical work to do, clothing was kept to an absolute minimum. This was noted by Morse. 'As we get into the interior, clothing seems to be used only on state occasions; the children are entirely naked, the men mostly so, the women partially so.' When Morse described the men as 'mostly' naked, he meant that 'men when naked always wear a loin-cloth.'⁶⁴ Alcock noted 'the summer costume of the lower orders, which with the men is limited to a narrow loin cloth, and the women a petticoat, sadly 'scrimped' in the breadths.'⁶⁵ If children wore no clothes, the men just a very simple loin cloth, and women were often bare from the waist up, this would cut out a considerable source of infection.

The tendency to wear so little or nothing, like the ability to share a hot bath with members of the opposite sex, was made possible in Japan by different concept of bodily decency. Morse tried to explain the difference in relation to clothing and bathing to his American readers. He wished to 'express some plain truths about the subject of nakedness, which in Japan for centuries has not been looked upon as immodest, while we have been brought up to regard it as immodest. The exposure of the body in Japan is only when bathing and everybody minds his own business. On the streets of the city or country I never saw a man looking at the ankles or legs of a girl...'⁶⁶ He then contrasted the position with

⁶¹ Morse, i, p.44

⁶² Wittermans, Pompe (xerox), p.41

⁶³ Siebold, Manners, p.126

⁶⁴ Morse, i, p.98

⁶⁵ Alcock, Tycoon, 1, p.120/121

⁶⁶ Morse, i, 97

the provocative dressing of Europeans and Americans, in their low-cut dresses and clinging swim suits. He could 'positively avow that we seem infinitely more immodest to the Japanese than they do to us.' 'The sight of our people in low-necked dresses dancing together in the waltz...kissing in public places...and many other acts cause the Japanese to regard us as barbarians...There are a few acts of theirs that seem very immodest to us; there are many of our acts which seem very immodest to them.'⁶⁷ European and American shame and prudery over the body are, of course, culturally rather unusual; the vast majority of human societies have not regarded the body in this way.

In general, the Japanese had developed a system of clothing which was probably just about as healthy as it could be. Improved dramatically by the cotton revolution of the seventeenth century and given support by the emphasis on simplicity, functionality and minimalism, their working clothing was ideally adapted to provide a loose, strong cover for the body when needed, but could be dispensed with entirely when superfluous. At the end of the nineteenth century Hearn was impressed by the fact that the Japanese were 'still unimpaired by unhealthy clothing...'⁶⁸ Though they had adopted many things from the West as being better, 'Basic clothing did not change significantly for most Japanese during the second half of the nineteenth century, notwithstanding the great popularity of Western goods in the large cities.'⁶⁹ For much of the time they wore little, but when 'they take to their clothing' they are 'well and comfortably clad.'⁷⁰ As Chamberlain summed up the situation, 'Take it altogether, the Japanese gentleman's attire and that of the ladies as well, is a highly elegant and sanitary one.'⁷¹

Three other peripheral elements of 'clothing' in the widest sense are also worth noting. The first are hand-kerchiefs. Most societies tend to blow their noses onto the ground, using their hands, an easy way to pass on disease. The 'capturing' of nasal ejections in a cloth or paper is probably a relatively recent invention in the West. It was often seen as one of the 'blessings' which was brought with civilization to benighted third world countries, a mixture of morality, hygiene and good manners. As described acidly by Dickens, moral societies were set up 'for providing the infant negroes in the West Indies with flannel waistcoats and moral pocket handkerchiefs.'⁷² Or as Mumford noted, 'printed calicoes and missionary

⁶⁷ Morse, i, p.98-9

⁶⁸ Kearn, Kokoro, p.28

⁶⁹ Jansen; Rozman (Eds) Transition, p.461

⁷⁰ Alcock, Tycoon, 1, p.300-1

⁷¹ Chamberlain, Things, p.123

⁷² Dickens, Quotations, p.126

pocket-handkerchiefs' helped to spread a 'layer of western civilization' like a 'film of oil over the planet at large.'⁷³ In Japan, however, the excellent Japanese paper, immensely strong and cheap, had probably given the world its first widespread use of paper handkerchiefs. Such handkerchiefs were noted by visiting Dutch doctors in the nineteenth century. Pompe commented that 'handkerchiefs are made of paper'⁷⁴ and Siebold noted the 'neat square of clean white paper, the Japanese substitutes for pocket-handkerchiefs, which, after being used, are dropped into the sleeve until an opportunity offers of throwing them away without soiling the house.'⁷⁵ Even the disposing of them was carefully controlled, it would seem. It would be interesting to know when such paper handkerchiefs are first mentioned in Japanese sources, and whether they were widely used anywhere else, for instance in China.

A second accessory, even more vital than handkerchiefs, are shoes. As was pointed out by a hygienics expert in relation to Britain, '...it is doubtful whether the great mass of the inhabitants in this country, at any rate, realise how much avoidable suffering they undergo on account of the lack of care of their feet.'⁷⁶ Hence 'Suitable footgear is of the utmost importance for both sexes. The feet should be warm and dry, not cold and damp...'⁷⁷ The problem for most societies has been cost. Daily work in the fields put an immense strain on any kind of footgear and the majority of people in most societies have not been able to afford to wear anything on the feet, except on special occasions. This leads to a great amount of ill-health and suffering, not merely from endless cuts, bruises, infections, bites, stings and so on, but through the various diseases which are picked up with bare feet, from various worm infestations through to bilharzia. Is there any evidence that the Japanese had solved this problem better than any other Asian societies?

At first sight it looked as if they were as shoes-less as others. Griffis suddenly noticed that 'I now see that the Japanese wear no boots or shoes.'⁷⁸ His comment, however, was referring to American-style shoes, made of leather, which were sold in shops and needed boot-blackening etc. In fact, the Japanese did wear foot-coverings, but without large numbers of domestic animals they were not made of leather.

⁷³ Mumford, *Technics*, p.289

⁷⁴ Wittermans, *Pompe*, p.55

⁷⁵ Siebold, *Manners*, p.24

⁷⁶ Lane-Claypon, *Hygiene*, p.117

⁷⁷ Lane-Claypon, *Hygiene*, p.104

⁷⁸ *Mikado*, i, p.357

For special occasions and among the reasonably well off, there were the divided socks or **tabi** made of cloth (hemp/silk?). Wooden clogs (**geta**) 'were useful in the mud and rain' and could be worn with the **tabi**. For ordinary walking or work, 'the poor wore sandals of straw called **waraji** which could be woven very quickly and cheaply and were even worn by horses.⁷⁹ For relaxing and special occasions 'the Japanese wore **zori**, a kind of thonged sandal.⁸⁰ Contemporary pictures of workmen in the nineteenth century show them all wearing footgear.⁸¹ **Tabi** and **clogs** had become the common wear of 'the landless, and even servants' by the early nineteenth century.⁸²

It is also worth noticing the care with which the dirt which accumulated on the footgear was kept out of the living part of the house. The house was maintained as a hygienic and pure area by keeping out all outer shoes. As Geoffrey wrote, 'One soon gets used to the routine of slipping off one's shoes, and the freedom from dust, mud, and germs as well as the quiet that reigns in the house reconciles one to the slight trouble.⁸³ In this area, bare feet or **tabi** were perfectly adequate. It would appear therefore, that the Japanese had again achieved an excellent balance. They had avoided the constrictions and tightness which often did so much harm to middle class western feet. This was noted by Hearn, in comparing the relaxed Japanese footgear to that of the West which 'had distorted the Western foot out of the original shape, and rendered it incapable of the work for which it was evolved.⁸⁴ There was no foot-binding of women in Japan. Unusually, and possibly uniquely in Asia, one has a large population which had very early on covered its feet using different materials of wood, straw and cloth while also allowing the feet to be flexibly shod.

Finally, there is the question of bedding. There is some difference of opinion on this matter. The actual nature of the bedding is described by Morse. 'The bed-clothes consisting of lightly or heavily wadded comforters are spread upon the floor, one or more forming the bed, and another one acting as a covering. The common ones are wadded with cotton; the best ones are made of silk, and are stuffed

⁷⁹ Hanley, Cambridge Hist, iv, p.691; ref. to horses wearing
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⁸⁰ *ibid*

⁸¹ Griffis, ii, p.357,416,426

⁸² Quoted in Cambridge 5, p.79

⁸³ Geoffrey, Immigrant, p.226

⁸⁴ Hearn, Kokoro, p.28/29

with floss silk.⁸⁵ Some thought that this bedding was unhygienic. In general it is remarked that 'People used the innermost room (the **nando**) both for sleeping and for storing household goods, and it must have been the darkest room in the house. It must also have been very unsanitary - according to Yanagita - particularly after Japanese started using cotton for bedding, which would get damp, musty and sweaty and, being stuffed with cotton batting, would be impossible to clean thoroughly without taking it apart.'⁸⁶

Isabella Bird refers to this problem of the storage of the bedding, describing people 'huddled up in their dirty garments in wadded quilts, which are kept during the day in close cupboards, and are seldom washed from one year's end to another.'⁸⁷ This may well be the usual reactions of a Victorian traveller and it is doubtful whether she made enquiries about the frequency of the washing. When it was stated that it was impossible to clean the wadding without taking it apart, as if this was a large obstacle, this overlooks the fact that, as we have noted, all clothes were made to be taken apart and washed. Although this added to the labour, it was considered normal. Furthermore, it seems to have been customary to expose the futons to air and sunlight each day: 'Then the futons were hung over poles or lines to sun.'⁸⁸ Japanese-style bedding has recently become the rage in the West, replacing blankets and sheets, because it is a much easier, more hygienic and pleasant form of bedding than the traditional western woolen bedding. It may have its problems, but it would not be difficult to argue that its nature, would have made it less likely to be a rich breeding places for various micro-bacteria and insects such as fleas and nits than the more static western bedding.

Conclusion.

As with other aspects of material culture, the Japanese and English approaches to the problem of clothing was very different, but again in both cases the results were positive. The English pattern was one of affluence which led to an unusually well dressed population. The materials, particularly animal products such as wool and leather, were in abundance. Thus by the sixteenth century, if not much earlier, the English were noted for their very stout, well-made and expensive clothing, which spread well down the social structure. The quality of the medieval cloths was decisively improved in the sixteenth century with the newly imported technique from Flanders and the Netherlands. That people wore warm, comfortable clothes and good shoes throughout the period is both very unusual for a pre-industrial

⁸⁵ Morse, Homes, p.210

⁸⁶ Jansen; Rozman (Eds), Transition, p.453

⁸⁷ Bird, Tracks, p.99; see also Scidmore, Jinrikisha, p.145.

⁸⁸ Scidmore, Jinrikisha, p.161.

population and of considerable benefit for general health.

These advantages were possibly coming under pressure at the end of the seventeenth century among the poorer part of the population. Then a new technology was introduced. This consisted of two central features. A new fibre, cotton, was introduced. This was lighter and gave a less secure home for the louse. Furthermore it was stronger and both required and permitted frequent washing. Yet it would have remained expensive if it had not been for the simultaneous development of the various steam-power driven looms, which suddenly made cotton available at undreamt of prices. The washing of the cotton cloths was also facilitated by that same steam-power, through the provision of water in the cities. This is one of the ways in which health and wealth inter-acted with each other in a positive feed-back loop.

As for Japan, it had benefited from the cotton revolution about two centuries earlier than England, though it was the cheapness and skill of its labour, and the scanty nature of the dress, that allowed the poor to enjoy this form of clothing rather than the invention of new power looms. Clothes in Japan were almost perfect in terms of health. Made in parts from cotton, light and voluminous in cut, they were easily washed in the abundant hot water. The main defect was that there was inadequate protection from cold, though the Japanese did not seem to be as sensitive to the cold as Europeans. There were other useful features also such as the universal wearing of foot coverings and paper hand-kerchiefs. Thus in terms of clothing the Japanese were probably more simply, cheaply and hygienically dressed than almost any known society. Only their bedding may have been a source of serious infection.