

A  
HISTORY  
of the  
TYPHUS  
of  
HEPTONSTALL SLACK  
which prevailed during the Winter of 1843-1844;  
Accompanied by remarks on the  
Sanatory State of that Village  
Together with a sketch of the  
Physical Condition of the Hand Loom Weavers  
BY  
ROBERT HOWARD  
Surgeon etc.

The cottage property of Slack, in point of architecture is cold, damp and dreary: the chambers are next to the slates without being under drawn, and in many instances, the interior being accessible to rain, wind and snow, the floors manifest signs of decay and dilapidation. The ground floor in the majority of cottages is seriously below ground level, thus endangering a vaporous and damp atmosphere, the whole exemplifying ignorance on the part of their founders, of the manner in which physical economy of the human system may be injured and disease produced.

The furniture at present found in the home of a handloom weaver, taking the average or mean state of them will be as follows. A half headed bed constructed of four legs, two sideboards and the head end furnished with paneled boards elevated about two feet above the cording with a small shelf on which to place the lamp or the candlestick. The bedding is as follows - one or two cotton blankets, a rough cotton overlay and a pillow, the last with the bed tick made of coarse sacking or canvas and the interior filled with chopped straw or chaff; and in this part such is the scarcity of these materials, that they are commonly unchanged for the space of six to eight years. The next item that attracts attention is a three legged table, rugged in appearance, an old chair or two and one or two more low stools and occasionally a chest of drawers. The cooking utensils consist of a frying pan, although usually the porridge pan is made to serve this purpose. There is not a kettle in one house in twelve: one or two old knives, but none in many instances: seldom a fork; an old teapot; two or three tea cups, saucers and plates, generally old ones; only one or two teaspoons; a few mess pots and by way of closing this part of the description a jug or milk-can may be added.

The clothing of the handloom weaver may be stated as follows; a fustian cotton suit which serves for years and at the present time is so covered with patchwork that the whole puts on the appearance of real thrift and an attempt to resist the outrages of time. The stockings also are so much mended that it would not be easy in many instances to point to the original fabric. I do not believe that one in twelve of them have had a new hat in the last four or five years.

Respecting their diet, it may fairly be said that oatmeal and potatoes are well nigh what they contrive to exist upon. The milk they use is three meals old, that is, if it is taken from the cow that morning it stands in the dairy until evening of the following day when the cream is removed and the remainder is sold to the producing class for consumption. Where no milk can be obtained treacle is used and when this is deficient small beer is used. The dinner consists of small pieces of suet fried with addition of water and salt a quantity of boiled potatoes is now added and the whole is blended into a partial pulp. This with a portion of oaten bread constitutes the dinner. Occasionally however extravagance is committed by introducing a very small portion of market bacon. But it must be confessed that now and then those families whose finances are a little better, coffee, tea or an infusion of mint, hyssop or tansy with sugar, wheaten bread and a little market butter superseded the former.

The tea and supper are so united so as to form one meal that is ordinarily oatmeal porridge, old milk and oaten bread. At the time of writing the account of this impoverished and monotonous diet it may be stated, as an unquestionable fact, that they have no means

sufficient of it to satisfy the cravings of nature and it is evident that in this part of the country the inhabitants are undergoing a rapid deterioration. This has gradually taken place during the last twenty years. True there have been periods of depression succeeded by prosperity in trade, but the whole being taken into consideration, the stream of tendency has been downwards and an individual can hardly shut his eyes to the appalling contrast exhibited between the position of the industrial class and those that depend upon an income furnished by a large rental.

When the rental in this part is viewed in relation to the price labour and the profit upon capital employed in manufacturing pursuits, with its contingent risk, the contrast is violent. The average wages in exchange for a hard week's work to a hand loom weaver are six shillings and sixpence (32.5p) while the rent of the land is £4-10-0 (£4.50) per annum. One field opposite my house lets for £9 per acre. When the recent 'ordnance survey' was in operation in this part one of the royal sappers and miners, an Irishman, said that land on our 'tops' would not, in Ireland, realise twelve shillings (60p) per acre. Under our present restrictive laws there is no escape. The frightful price of provisions, too, when compared with remuneration for labour and the fluctuation in the employment of the hand loom weaver, so long as they continue, must perpetuate his unhappy physical condition and periodically bring him and his family into close intimacy with the baleful influence of typhus fever, small pox, scarlet fever, measles etc..

As a further exemplification of the extremity to which the hand loom weaver is reduced, suppose the father of a family became the subject of a pleurisy - how is attendance paid for? Nine times out of ten from the orders of a relieving officer; and exceedingly limited as the sum is, it is preferable to placing to the credit of the patient a bill nominally four or five times the amount; and if the event were fatal, the funeral expenses would also be extracted from the parochial rates. There are many reasons of a moral nature for accepting the parochial stipend for medical services. One is that it brings the state of the population more immediately under the cognizance of the successive 'board of guardians'. There their tales of sorrow are told and information of a valuable description is communicated the 'landed interest'. Another is, that if these degraded specimens of humanity were sued in the 'court of requests' for a bill of eighteen or twenty shillings (90p/£1) the bill with the unconscionable fees of court, extorted from the poorest members of society, would operate within the domestic circle in a manner that shall not be attempted to be detailed.

Observe the following picture: I was requested to visit a fever case; the man lay upon the bed with his arms and legs drawn up so as to form acute angles; his mouth and teeth mottled brown. In the room were three small children, squalid and ill-clothed, and one of them said, 'give me some bread mammy'. This was interrupted by the low muttering of delirium of the father. The scene relaxed my nerves. Again and with increasing solitude, was reiterated, 'mammy, give me some bread'. The mother inclined her head forward and wept.

A fact just intrudes upon the mind, but it is of so delicate nature, that it must be touched upon in a brief and light manner. How fares the female in an obstetric period? As

near as can be calculated, one in ten receives medical assistance, the remainder none at all, except such that can be afforded by the neighbouring women, who gratuitously give their attendance. When the application is made for medical assistance, generally it is on account of a first birth, a wrong presentation, or the female being seized by convulsions, or some other important circumstances. This is delicate ground and is touched upon with delicate sensibility. Indeed, these divulgations are better adapted for privacy than publicity; but unless they receive some attention, however superficial, much that concerns the interests of the hand loom weaver must remain occult. Then what is the situation of the wife of the hand loom weaver during the parturient efforts? She is upon her feet, with a woman on each side, her arms placed round their necks; and in nature's agony, she almost drags her supporters to the floor; and in this state the birth takes place. Or, otherwise, the subject alluded to kneel upon a cushion on the floor, the arms and chest supported upon a pillow, placed in a chair bottom. And why is this the case? The answer is, because there is no change of bedclothing; and the experienced part of society will perceive in this a weighty reason and serious deficiency.

I will now endeavour to give a short account of the nature of the labour, and the average time that the hand loom weaver in full employ works in a day. It is about eleven and eleven and a half hours; and it should be stated that a robust female will earn as much as a male, except in one or two instances, where the work is too heavy; such as grogs, eight healds, and the higher reeds of lastings, ranging from seven and a half to ten threads in the reed. And it should be understood, that if a head of a family has two or three of his children who have attained to adolescence, it yields him but slight advantage, because they pay a given sum for their 'tabling' or maintenance, and the surplus they appropriate as they think proper; if females, they, with that pride and independence incident to the spirit of a Briton, endeavour to improve their exterior by clothing.

But just reverse this definition, and look upon a man with four small children, and the wages six shillings and sixpence (32.5p) per week; if this be in any way increased, it must be by the wife, in addition to the cumbrous domestic duties, weaving a portion of her time; and fire, rent, clothing, food, etc., must be procured out of this weekly income; but how they continue to subsist at all, 'confounds the very faculties of ears and eyes'.

One very frosty morning, about 5 o'clock, I was returning home from an obstetric case; the residence of the patient, a bleak and elevated portion of 'Town Moor'. I overtook, on the Knowle, a young man, and after the ordinary salutations, inquired to where he was proceeding. He answered, to L.....n. He came from Blackshaw Head. The distance between the two places is about six miles. I asked of what description his work was, and he replied, 'a crape'. He had woven it into four score and four hanks of very small weft, and his wage was two shillings and sixpence (12.5p). Here is a distance of twelve miles performed, over an abrupt and mountainous surface, and eighty four hanks of small worsted woven, for two shillings and sixpence! I can remember the time when manufacturers hired rooms in districts, and the warps and wefts were conveyed to them by horse and cart for convenience of the weavers; and the employer asked after the employed; but the case is now diametrically opposite, the labourer not only takes long journeys in

quest of work, but is doomed to many disappointments. This state of things must surely indicate that great pressure is upon this branch of the manufacturing interest.

One case lately came to my notice. An individual carried his piece, an 'eight heald plaid', I believe he said it was, from above Edge Hey Green to Denham, distant ten miles. Upon delivering his work he received, as his wage, nine shillings and sixpence (47.5p) per piece. He then obtained an order for a warp, to M..... mill, distant four miles from Denham. On his arrival, he was obliged to wait several hours before it could be prepared for him. Thus, a man is obliged to weave four score hanks, carrying his work upon his back, bring home a fresh warp, and travel over twenty miles of ground, for the sum of nine shillings and sixpence! But there are some instances, and those by no means uncommon, of much greater hardship; yet this is a description of work that requires great physical power to perform. It is hardly conceivable that such a state of things could exist, were it not that the employment is unremunerative, and attended by much risk.

I was requested recently, to observe the following case. A female was delivered of a fine child. She had no medical aid. The family, including the recent birth, consisted of eleven; and during the parturient efforts, she had in bed with her three small children. There was no two pennyworth of food in the house! The means of subsistence were as follows; the husband wove lasting, eight in the reed; one hundred and thirty hanks were put into the piece; in exchange for this enormous amount of labour, he received nine shillings and sixpence. One of his children was a 'short-timer' at a factory, the wage being one shilling and sixpence per week.

Another case was this: a man, residing at Oswald, played one week for a warp; during that time he went threesomes to L..... mill, Halifax, distant eight miles and a half. Thus, previous to obtaining one, he journeyed fifty-one miles: then the warp was to 'stretch and tie in', and he had a large family.

I will conclude this chapter by a brief description of another kind of employment, which may appropriately be designated that of the 'PACK HORSE'.

To give a clear idea of this mode of obtaining bread, the following case is selected. A female now residing in Heptonstall enters into an agreement to deliver the pieces woven by a certain number of hand loom weavers to their master whose warehouse or 'taking in room' is at Denham, distant nine miles. She has a small sum per piece allowed for her service, yielding to her about six shillings (30p) per week. The first portion of her journey is to the 'New Bridge', the descent of which is declivitous, and might also be compared to a house side. The next is an ascent, steep, uneven and craggy; and having climbed its altitude, she arrives at either Pecket Well or Bent Head, Crimsworth. This part of the journey is extremely laborious in any description of weather, without the addition of a burden.

From personal inspection, it appears there are three principal springs in and above Heptonstall Slack. One is covered in, and arises a little behind the church of the General Baptists, and, within a few paces of the Stoneshey Gate road, advances obliquely downwards and forwards, in the direction of the church: it then crosses the road and continues down the left side of the road towards Heptonstall, until it reaches the residence of Mr. John Foster (whose property it is said to be), where it emerges and empties itself into a dilapidated stone trough. As this conduit is covered throughout its entire passage, it will be anticipated to be good water; and being the only water of good quality available to the people of Heptonstall Slack, it is resorted to frequently; but this is not only a cause of great inconvenience to those that reside at some distance from it, but frequently induces them to use water for culinary purposes of a very unsuitable description.

The next is commonly called 'THE BULYON'..... This spring is situated on the left hand side of the Knoll, facing the Slack, and near the road, about half way up the declivity. It is an assemblage of three or four small but energetic springs, and their tributary streams unite and meander along the foot of the recently raised road. It then dips under the road and reappears on the Popples side, enters a gutter, and pursues its course until it reaches the top of the Slack: it then runs forward until it nearly reaches the bye-road leading to the 'Fields', where it creeps under the highway, and when it again becomes visible, is divided into two streams, one which falls into a stone receptacle opposite the mansion of John Berry Esq., the other flows into an open sewer, which leads to some wretched cottage property at the bottom of the Slack.

At its origin this is capital water, but along its passage it becomes, to a certain extent, loaded with vegetable matter, and in the summer and autumn, is converted into a nursery of loathsome animal life, which, aided by solar heat, is highly injurious to its quality. From the commencement to the termination of its track, except where it is covered by the road, it is open and exposed, and runs over a bed of mud and slime; and the crystal stream is further polluted by the offal of a slaughter house; thus that which is essential to the health and comfort is converted into an agent of disease. If this hygeian font was covered in, and the water conducted in pipes properly distributed and laid, in a sanatory point of view, it would be of inestimable value to the inhabitants of the Slack.

There is a third spring on the Popples adjacent to the road, about half way up the ascent of the knoll, on the right hand side when the eye is looking up the Slack, one which supplies the Slater Ing nearest Heptonstall, and the other cottages situated at Black Dyke.

There is another supply of water by means of a pump, in the 'pump house', opposite the smithy, at the bottom of the Slack. I have not had leisure to analyse this water, but it appears to hold in solution carbonate and sulphate of lime, with a trace of iron; and besides containing these saline ingredients, its abominable contiguity to a privy - the partition between the well and it being merely the wall which conjoins the two buildings; therefore, scarcely a doubt can be entertained that, in some modified form, a portion of human excrement will filter into the well, and some deleterious gas or gasses

float in the cavity of the well unoccupied by water, probably carburetted or sulphuretted hydrogen; therefore, until this privy is razed to the ground, the water can scarcely be deemed acceptable for human use.....

We will now turn our attention to the sewers and privies, and select one or two therefrom as instances.

It has been stated that one part of the termination of the water whose source is the Bulyon, discharges itself into a sewer; it is an open one, and previous to reaching the cottages before alluded to, runs through the cess pool of a privy, driving before it the agglomeration of human excrement. On its arrival at the cottages, it meets another open sewer, the declination of which is from the opposite extremity of the cottages. They now unite in front of these habitations, and the commingled filth and detritus then pass through a sewer under one of the dwellings - the flags of the floor being its only covering - and the effluvia which permeates the seams is occasionally suffocative to the inmates, and reaccumulates in a hole prepared for its reception. In the next house to that alluded to, three cases of fever occurred, and in the next but one, four cases, two mild and two severe ones, out of which one death took place.

The next that will be pointed out is a covered sewer, the opening of which is in the porch of a farmhouse. It had no proper outlet at its termination in the field behind the house, the field being considerably above the level of the sewer, and not having been opened for twenty years, the stench emitted from its large aperture in the porch was extremely noisome. Six individuals in this house were attacked by the typhus, and, horrible to relate, three died. The sewer was opened, and the exhalations from it well-nigh overwhelmed the bystanders, as a powerfully depressant, producing nausea, vertigo, and sickness.

The next repository of filth and source of pernicious exhalation, which will be pointed out, is the well formerly supplied with a pump, situated in a front unoccupied room, in the centre of the two hovels which face the 'Fields'. Having entered this well-house we found a door on the right and on the left, each opening into a cottage, that on the right hand consisting of one room about two feet below the surface of the earth, the other of a ground floor much lower than the earth's surface, with its flags broken into fragments, and one chamber. The successive inhabitants of these abodes, for the space of thirty years, had made the well the reservoir for all manner of refuse. The augmenting mass of material, in its dark and loathsome location, by chemical decomposition and altered arrangements of its elementary parts, became converted into offensive and putrid matter, and having, in the course of years, attained a more concentrated power, the constitution of the atmosphere in its vicinity was deeply contaminated, which, assisted by summer and autumnal heat, rendered the inmates victims of typhus. In October and November last, in one of the cottages, three bad cases developed themselves; and about three years ago, the wife of the present occupant of the other became its subject, and died. During this autumn and winter, other three cases occurred in the cottages on the other side of the road, and one proved fatal. The well was covered by a stone trough, in the middle of which was an orifice, through which this mass of corruption found its way.

The privies set apart for the convenience of the productive class, are about twenty seven in number, those of the Crown Point inclusive. Their construction is simple, being composed of rough stones, some covered with one or two large slates, but a large proportion of them do not afford this protection; they are destitute of doors, and the only seat they possess is a rude pole, inserted into the stones on each side, about two feet from the ground, and in front of the cess-pool to these cloacine, males, females and their children resort, and the influence upon the morals of the population is of a melancholy character. \* Recently, an irregular and unscientific attempt has been made to clean this Augean stable.

The cottage property of Slack, in point of architecture, corresponds with that of the privies. They are cold, damp, and dreary: the chambers are next to the slate, without being under drawn; and in many instances, the interior being accessible to rain, wind and snow, the floors manifest signs of decay and dilapidation.

The ground floor in most of the cottages is seriously below the surface of the earth; thus engendering a vaporous and damp atmosphere, the whole exemplifying ignorance on the part of the founders, in the manner in which physical economy of the human system may be injured and disease produced.

#### Remote Cause of Typhus Contagion etc..

I think, from what has been adduced on the sanatory condition of Heptonstall Slack, it will be admitted the inhabitants do not enjoy the felicity common to those in 'Utopia', who, early every morning rise to suck in wisdom and happiness from the sunbeams. It will now seem more evident that typhus is local and domestic in origin. After mature and protracted investigation, my induction is, that the primary and specific cause of typhus is a poisonous and noxious vapour, floating in the atmosphere, called miasma or malaria, evolved by the animal and vegetable substances undergoing putrefaction and fermentation, produced by the application of heat and moisture, assisted by time, volume, and condensation.

This disease usually appears at the close of summer and autumn, and at the commencement of winter.....

As summer advances, fresh cases take place; and towards the commencement of October and throughout November, it exists in amplest power and malignancy, but progressively declines towards the close of the month, and in the early part of December disappears.

I will conclude this chapter by expressing the opinion, that if an act of Parliament was obtained, obliging the owners of property to make certain alterations in these cottages and other buildings now in existence, and conform to certain instructions in all future erections, as well as those now in progress, in regard to their architecture and the construction of sink-stones, sewers, cess-pools, and the removal of the contents of the two



latter, at short intervals, to suitable distances and places, and the right use of a little quick-lime immediately subsequent, in connection with efficient drainage, that typhus fever be as effectually extinguished as small-pox is by vaccination.

*\* The bulk of the property in the Slack belongs to that class whose vocation does not require talent, utility or enterprise.*

#### Symptoms of Typhus, with their Modifications.

.....I was requested to visit one case, in which the mental excitement for several nights in succession, was so great as to require some restraint; yet this will seem surprising, when it is that the mouth, for many days, had remained wide open, apparently as low as the alveolar processes of the lower jaw; and the temporalis and masseter muscles had so far become deprived of their power, that the jaw was immovable by the patient. The muscles of the tongue were in a similar situation, though probably confined to its unnatural position by viscid saliva and sores, evaporated to a thick consistence by the caloric in the body, and especially that given off by the lungs..... The teeth looked a dirty white, and somewhat mottled, where the gums adhered to them being brown. The case proved fatal, and was the second in the same house, the mother having died some days previously.

.....In several cases a cough occurred.....and, in one or two cases, attended by spitting of blood.....The respiration was also accelerated.

.....In many cases a diarrhea commenced two or three days after the commencement of the fever.....

In certain cases the patient was passing eight or ten evacuations in one night.....

The two diseases.....made their invasion about the commencement of September, and disappeared, almost simultaneously, about the fourteenth of February, 1844; but another disease and epidemic was coexistent with them, which was the Whooping Cough. Many children died of this disease complicated with inflammation of the lungs

#### Population of Heptonstall Slack

January 24th 1844

Under 5:	48	Age 5/10:	50	Age 10/15:	49
Age 15/20:	37	Age 20/25:	27	Age 25/30:	16
Age 30/35:	14	Age 35/40:	23	Age 40/45:	23
Age 45/50:	14	Age 50/55:	15	Age 55/60:	11
Age 60/65:	8	Age 65/70:	6	Age 70/75:	4
		Age 75/80:	1		

Note.

In 1842, Edwin Chadwick produced 'Report on the Sanitary Condition of the Labouring Population' and he says that 'the various forms of epidemic, endemic and other disease caused or aggravated, or propagated chiefly amongst the labouring classes by atmospheric impurities produced by decomposing animal and vegetable substances, by damp and filth, and close and overcrowded dwellings which prevail amongst the population in every part of the kingdom, whether dwelling in separate houses, in rural villages, in small towns, in the larger towns-as they have been found to prevail in the lowest districts of the metropolis'.

He continues 'that such a disease, wherever its attacks are frequent, is always found in connection with the physical circumstances above specified, and where those circumstances are removed by drainage, proper cleansing, better ventilation, and other means of diminishing atmospheric impurity, the frequency and intensity of such disease is abated; and where such and where the removal of the noxious agencies appears to be complete, such disease almost entirely disappears'.

Robert Howard bases much of his paper on the physical conditions stated by Edwin Chadwick and he makes the mistake, like Chadwick, in attributing endemic diseases to 'atmospheric impurities' rather than being borne by polluted water supplies.

Edwin Chadwick's Report may be read in *Nature and Industrialisation*, edited by Alasdair Clayre, Oxford University Press in association with the Open University Press, 1977.