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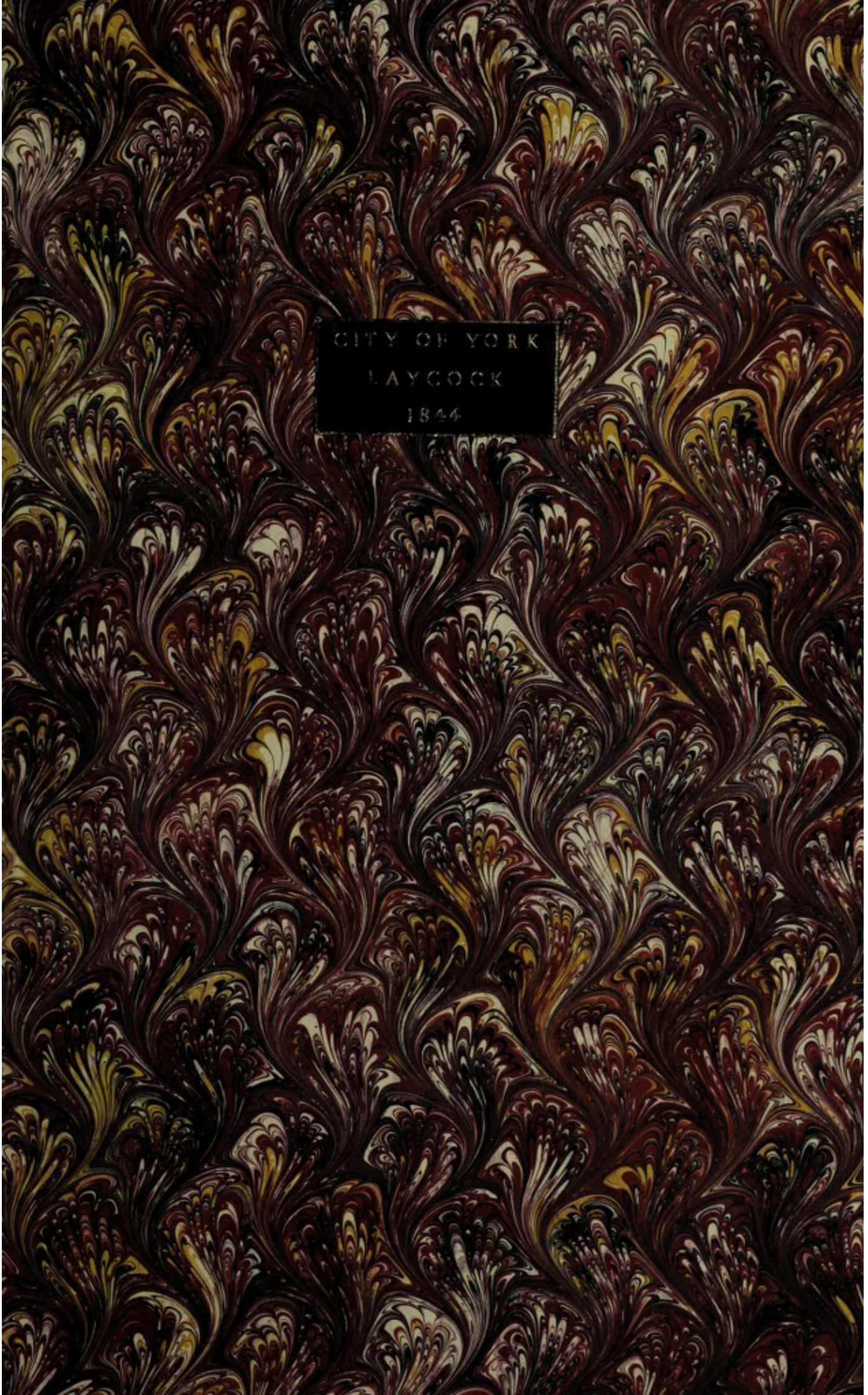
CITY OF YORK
LAYCOCK
1844

FIRST WATER LANE, YORK.

CITY OF YORK.

REPORT on the STATE OF YORK, in Reply to the Questions circulated by the Health of Towns Commission. By T. LAYCOCK, M.D., Physician to the York Dispensary.

YORK is situate in the centre of an extensive vale of that name, in north latitude 53° 48″, west longitude 4° 19″. It lies between the rivers Ouse and Foss, immediately above their junction. Both are tidal rivers and navigable. The tide, however, is prevented from rising so far as the city by a lock (Naburn Lock), about five miles distant. The summer level of the Ouse, (as measured on July 1st, 1842,) is 16 feet above the datum plane of mean tide; that of the Foss is 23 feet above the same plane; a lock just above its junction with the Ouse, keeping it at this higher level. The geology of the district is explained in the following letter addressed to me, by the Reverend William Vernon Harcourt, M.A., F.R.S., F.G.S., Canon Residentiary of York Cathedral, &c., &c., and Chairman of the York Sanatory Sub-committee.*

DEAR SIR,

I shall be happy to contribute such assistance as lies in my power, to the labours which you have so laudably undertaken, by stating to you the views I entertain of the waters and drainage of York.

The water available in York for different purposes is supplied from three sources; 1st, from the river Ouse; 2nd, from wells which vary in depth from about 12 to 40 feet; 3rd, from borings carried down to a depth of from 350 to 380 feet from the surface.

In the superficial wells, the water is found and stands at different altitudes; in the deep borings the chief supply is found below the depth of 300 feet; the water rises in distant borings to about the same level, and that level I estimate at from 15 to 20 feet above the common level of the river Ouse. The water of some of the shallow wells lies at a higher elevation than this. Thus, the bottom of the well in front of the north-west door of the Minster is 12 feet 3 inches deep from the surface of the ground; and the ground is, I believe, about 32 feet above the mean level of the river.

The supply of water from the artesian wells is so copious, that the pump of one of them, as its proprietor, Mr. Nash, informs me, has furnished 100 gallons per minute, for 10 months together, without intermission or diminution, working day and night. The use of the supply is to serve the boilers of steam-engines, the rapid incrustration of which with an ochreo-calcareous deposit, shows the water to be ill adapted for ordinary purposes.

As no analysis has yet been made of this deep water, I have thought it worth while to examine it, and find its constituents such as may perhaps render it serviceable for medicinal use, since it contains, together with a small proportion of bicarbonate of iron, a mixture of Epsom and Glauber's salts, amounting to 48·3 grains in the gallon, that is to say, 33·9 grains of the crystals of sulphate of magnesia, and 14·4 grains of the crystals of sulphate of soda.

Mr. J. Spence has published an account of the principal ingredients in the waters of 20 of the superficial wells in York,† from which it appears that of these only five contain any sulphate of magnesia, and that in that which contains the largest quantity of it he did not find one-third of the quantity which I find in the deep springs, and this unaccompanied with any sulphate of soda.

Mr. Spence has also analysed the water of the river Ouse, and has found in it little more than one-fiftieth of the sulphate of magnesia found by me in the deep springs, and no sulphate of soda.

These chemical differences concur with the differences of level at which the waters of the superficial and the deep wells are met with, and at which they stand, to show that they have little, if any, connection with each other, or with the water of the Ouse. The causes of the difference in the quality and ingredients of the three classes of water, as well as of the superiority of the lower springs in volume of water, will be found in the geological conditions under which they are collected.

The section of the beds on which the city of York stands presented by the borings of the artesian well at Mr. Swale's factory in Walmgate, is as follows:—

	Feet.
1. Clay and gravel	18
2. Sand, fine river, light coloured, darker	60
3. Sandstone rock, fine grained, white	1
4. Loose sand	1
5. Sandstone rock, as above	58
6. Clay, blue, (and water,) a thin seam	0
7. Sandstone rock, as above	62
8. Clay (and water), a thin seam	0
9. Sandstone rock, as above	178
	378

This sandstone rock belongs to the beds of the *new red sandstone* formation, which crop out in a low line of undulating hills along the western margin of the basin of the vale of York, passing in a south-easterly direction from Rainton by Borough Bridge and Ouseburn to Green Hammerton, and emerging again from beneath the diluvial covering of that basin at Bilbrough, within a few miles of York. The immediate substratum of the soil in this line over a considerable tract of country, consists of these porous beds, and the water which falls or flows down upon it passes through them, between the seams of clay which alternate with the sandstone, along the dip of the strata, eastward to York; it is thus carried beneath the diluvium below the bed of the Ouse, and is dammed up under

* The following gentlemen constituted this Committee:—The Lord Mayor; the Recorder; Alderman Hudson; Rev. W. V. Harcourt; T. Barstow, Esq.; G. Goldie, Esq., M.D.; W. L. Newman, Esq., Actuary; S. Tuke, Esq., Merchant; C. Williams, Esq., Surgeon; B. Dodsworth, Esq., Surgeon; G. Brown, Esq.; T. Laycock, M.D., Secretary.

† Mr. Spence's analyses are given in the Appendix to this Report, Tables 3 and 4.

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the superincumbent mass, in the reservoirs of the sandy beds, to the above-mentioned height of 15 or 20 feet above the summer level of the river, to which height it is found to rise where the superior seams of clay are perforated by boring.

The water of the Ouse consists chiefly of the contributions of the rivers which flow from the high hills on the north-west of York, (especially the Swale, the Ure, and the Nid,) and are fed by the rains falling on their summits. The streams from this source, after percolating the *mill stone grit*, with which those hills are capped, find their channels on the surface of the impervious beds of the subjacent *limestone* and *shale* along the vallies, and are conveyed on linings of *diluvial clay*, across the edge of the superior strata, and over the drift-covered plain of the *red sandstone* to York.

To this account of the geological conditions under which York is supplied with water, it is to be added:—1st. That the gritstone hills which furnish the river-water include few materials of saline impregnation. 2nd. That the beds of the red sandstone in which the deep springs run are pre-eminently saliferous. 3rd. That the rubbish of centuries, accumulated in some parts of the city to the depth of three or four yards over the diluvial beds which contain the superficial wells, is full of decomposing matters tending to mineralize and contaminate the water.

The waters of these wells, accordingly, are highly charged with solid matter, amounting, on an average, to about 60 grains held in solution in an imperial gallon. In two cases Mr. Spence found in them from 6 to 7 grains of Epsom salts, and in one 11 grains; in two others he found 31 and 38 grains of neutral salts of soda and potash. In these last an infiltration may be suspected from the deep springs; but in general there are sufficient materials in and upon the drifted beds to account for the sulphate and carbonate of lime, of which the solid contents of these waters are chiefly compounded, and which render them harder than is desirable either for drinking or for culinary use.

The solid contents of the water of the deep springs amount, according to my analysis, to 96 grains in the gallon; and of these one-half are medicinal salts. It is evident, therefore, that it cannot be employed for either of the above-mentioned purposes.

In the water of the Ouse, on the contrary, derived from purer sources, and further purified by the exposure to the air which it undergoes in its course, the whole amount of solid contents held in solution, according to Mr. Spence, is only 9 grains in the gallon; and there appears to be no ingredient in it to prevent the supply which it offers to the city from being as excellent in quality as it is unlimited in quantity, were it turned to the best advantage.

At present the public use which is made of it is insufficient to keep the courts and alleys of the city clean, and its domestic use, especially among the poor, is greatly limited by the unfiltered state in which it is furnished from the river by the engine of the Water Company. In this condition it is usually so turbid and dirty as scarcely to be fit for washing, and still less for cooking, or for being drunk. I conceive that arrangements might be made without much difficulty which would effectually remedy this great defect. The invention of *close, hollow, filtering boxes*, constructed of the porous sandstone of Pontefract, jointed with Roman cement, might I think be applied with advantage on a large scale to the building such a box at the waterworks, within or at the level of the river, the water of which would penetrate the six sides of the cistern at a rate which would enable the pump connected with it to supply the city with filtered water; or if the Company would not undertake this, smaller filters of the same description might be placed in tanks of river water, distributed at convenient distances through the city, so that the poor might have easy, and by the help of a rate, cheap access provided for them to an adequate supply of that most indispensable requisite for cleanliness and health, good water.

If this object were effected, a material obstacle would also be removed to the complete *drainage* of the city.

At present, even in some of the highest parts of it, the same water that supplies the wells forms with the mixed matters that lie in it a black bog, in which the foundations of the buildings rest. Water standing so near the surface, and breathing out from the organic matter dissolved in it carburetted hydrogen and other gases (as in one case was proved by probing under the floor of the house with a rod, when an inflammable gas issued from the hole,) cannot but be suspected of being injurious to the public health. These waters might easily be drawn off by a deeper drainage; but the consequence would be the loss of some superficial wells, which till the river water shall have been rendered more generally and perfectly available, cannot perhaps be dispensed with.

Attention was drawn to the condition of the drainage in York in the year 1831, when the appearance of cholera was expected; and the following statement on that subject was then made by the central Board of Health:—"The want of sufficient common sewers, and the general imperfection of the "whole drainage of the city is placed in the strongest light by the reports of the District Boards. It "is the subject of complaint in every district and almost every parish in York. By this great defect "every public and private nuisance is doubly aggravated. The slaughter-houses, dung-heaps, pig-"sties, &c., which unfortunately subsist in the heart of the town, are represented in several instances "as pouring their fetid contents into open drains, and the effluvia to be sometimes such as might alone "suffice to generate contagion. The dampness also of the dwellings in some of the streets is to be "attributed to the same cause, and must be considered as scarcely less prejudicial to the health of the "inhabitants. In ordinary seasons these are among the principal sources of the fevers and other "complaints which constantly prevail, more or less, in the ill-drained and offensive parts of a populous "town; but at a time when the approach of pestilence is dreaded, the most serious and immediate "attention ought to be devoted to the improvement of the drainage."

During the twelve years which have elapsed since this statement was published, many new drains have been made, and the Commissioners acting under the City Improvement Act have expended considerable sums in effecting this object; but although the drainage of York has been thus improved at several points, much remains to be done before it can be deemed by any means sufficient. The greatest impediment to its further improvement is created by the damming up of the Foss at the Castle Mills for the sake of the navigation, 7 feet above the level of the Ouse; and not only is the drainage of the whole eastern side of the city impaired by these means, but the population are subjected on the sides of the Foss to the influences of a stagnant water, replete with vegetable and animal matters. This has been long felt to be a most serious public evil; it is one which all who have any regard for the health of the inhabitants ought to exert themselves to remove, and it might be removed, I conceive, at a cost from which the rate-payers of the city ought not to shrink.

The last point of sanatory suggestion, to which I have to advert, is the case of that portion of the population of York who have the misfortune to live in the lower parts of the streets bordering on the Ouse, and whose dwellings are continually inundated by the floods: you well know how much the

virulence of epidemic and contagious diseases is aggravated under these circumstances, and are aware, I doubt not, of cases in which the use of the limbs has been lost by the chronic disorders consequent on long inhabitation in these houses. In one such case within my own knowledge the house is uncellared, and the brick floor of the room in which the family live retains the damp for weeks or months after the flood has subsided. The evil might be relieved, if it were possible to diminish the height to which the water rises in floods above its mean level by any improvement of the outlet of the river below York; but the inundation is sometimes too great and sudden to be prevented by these means; and it deserves consideration whether houses so situated should not be subjected to the regulations of a sanatory police.

I have now recorded, I think, all the information which I possess relative to the *drainage* and *waterage* of York, and it only remains for me to beg that you will make whatever use you may deem advisable of this communication.

I am, dear Sir, your's faithfully,

Bolton Percy, May 1st, 1833. (Signed) Wm. Vernon Harcourt.

The following Report on the drainage of York, supplied to the Committee by J. B. Atkinson, Esq., of York, architect, will appropriately follow Mr. Harcourt's communication. Mr. Atkinson says:—

Previously to an Act of Parliament being obtained which placed the management of the city paving, draining, and lighting under the control of Commissioners, the drainage throughout was very inefficient, and although during the last 12 or 15 years about 6000 yards of drains have been constructed at a cost of 2000*l.*, raised from the city rates, yet much remains to be done in order to render the sewerage efficient. It is much to be regretted, that in carrying out this important object the regard for economy which it has been thought requisite to observe has materially lessened the utility of what has been done, as the present drains are not such, either in size, solidity, or depth, as the future interests of this important city would call for; and this circumstance will be a great obstacle to future operations. The whole of the drains built during the last 20 years are laid on the vegetable soil, which is of a spongy or boggy nature, and fails in giving that support necessary to enable the drains to retain their form and level. The general dimensions of the drains are 12 × 18 inches to 18 × 21 inches, and they are all executed in 5-inch brick-work, and of a barrel form. The lower portion is generally laid *dry*, and the upper arch turned in mortar. The fall of the drains per lineal yard is about half an inch, and sometimes less; and, on account of the spongy bottom, and the slight and open nature of the brick-work, I believe, the majority are in a very inefficient state. In some of the principal streets, the depth of the drains is from 8 to 10 feet below the street level, whilst in others it is only 5 or 6 feet. These depths are barely sufficient to allow of a drain passing under the cellars of contiguous property, as they should not enter the street drain at the bottom level, but at the top; and in preparing the foundations for new buildings, I have rarely been able to keep the trenches free from water; and it may be adduced from this remark, that the foundations of cellared buildings generally stand in water. The majority of the public drains are discharged into the river Ouse, whilst those in the vicinity of the river Foss empty themselves into it. This latter river is retained at a level seven feet higher than the Ouse, by lock-gates placed at Castle Mills-bridge, which locks have a detrimental effect on the drainage of that part of the city near this river; and it is a well known fact that the vicinity of the lower portion of Walmgate, Hungate, and the Foss Islands is frequently the seat of disease, owing to the exhalations from the damp. The streets of North-street and Skeldergate are likewise subject to be flooded from the river Ouse occasionally, and much inconvenience results therefrom, but I presume no remedy could be applied to this evil, without sacrificing the interest of the navigation. In carrying any more efficient project of draining into effect, advantage cannot be taken of the contour or anticlimal lines of the ground on which the city stands, but it will be imperative to lay any future drains in the line of the present streets; the relative levels of different parts of the city being previously ascertained.

In the Appendix (Nos. 10, 11) will be found, 1st, A list of the streets drained by the City Commissioners, with the length, size, and cost of the drains; and, 2ndly, A list of the streets paved, and their length. Inefficient as the sewerage of the city is, it is rendered more so by the fact that back courts and streets, and many dwellings have no side drains communicating with the main sewers already formed. The remarks (see Appendix No. 9) of the District Visitors, acting in connection with the Sanatory Committee, amply show to what an extent this serious evil, so easily remedied, is allowed to exist, and apparently without any means being adopted to remove it. In fact, the description of the state of the city in 1831, as given in Mr. Harcourt's communication, may be applied with general correctness to its present condition. It is manifest that immediate, energetic, and systematic measures are more requisite than inquiry.

The houses of the higher classes and all the more respectable houses recently built have water-closets which empty into drains or cesspools. In the newly built ranges of cottage tenements, one privy is appropriated to from four to eight, twelve, and even fourteen families; sometimes, however, there is a privy to each house. The position of the privy is selected evidently without any reference to the health or comfort of the inhabitants. In a new range of cottages in Long Close-lane, there may be seen the door of the common privy at each end exactly opposite to the door of a tenement, so situate that it is impossible there can be any ventilation. In "Plow's buildings," the privies of the houses are in front. The soil-holes are usually open, and run over, and flood back courts (as in Court, No. 46, Hope-street, Beedham's-court, Skelder-gate, &c.) In St. John's-place, Haver-lane, during wet weather, the privies have to be emptied by buckets into the open channel in the middle of the street. In the Water lanes there are several houses *without* privies, so that the inhabitants have to use those of their neighbours by stealth, or go into the street. The pigsties attached to numerous cottages and yards constitute a most unnecessary and unpleasant nuisance. If the cottagers and others were to sell their

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offal food to pig-feeders in the country, as they sell their manure, the profits would be much greater, leaving their improved health out of consideration altogether. The extracts from the District Visitors' books, previously referred to, further strongly elucidate this part of the Inquiry.

The courts and alleys inhabited by the poorer classes are cleaned by appointed scavengers. The night-soil is retained, giving off its impurities, until a sufficient quantity is accumulated, when it is removed from the yard during the night in barrows (and this is the method also in private houses), and put into the street; from thence it is carted away to large dung-hills within the city. There is an immense heap of this kind at the side of the river Foss, close to Layerthorpe bridge, and the inhabitants all around complain loudly of the stench. There is another such dung-heap behind St. Margaret's church, which quite pollutes the atmosphere around it. Minor similar heaps are placed (for the convenience of water-carriage) in the neighbourhood of the Foss, into which the liquid contents of all are discharged. The night-soil of the city is usually sold to the proprietors of these dunghills, who are manure merchants by trade. Sometimes the inhabitants of a court, having a common privy, sell the soil from the soil-hole, and appropriate the proceeds to the payment of the water-rates; in other cases the landlord of the tenements takes the night-soil, and in return pays the water-rates. A load and a half is on the average taken from each house annually, and the cost of getting out and loading is about 2*s.* per load; so that the city pays at least 900*l.* per annum for this labour. The annual value of the manure of all kinds made in the city cannot be less than 8,000*l.* to 10,000*l.* In addition to the night-soil, there is the manure of pigsties, cowhouses, and stables, all which are found in great numbers in the courts and yards, especially of the poorer classes.

The City Commissioners are vested with powers for the enforcement of cleansing and the prevention of public nuisances; but it appears from the statements just made that these powers are inadequate to the full attainment of the object in view.

Houses are built both in wide streets and in narrow courts. To some cottage tenements lately built there is no drain or sewer in the street, it is also unpaved and so full of ruts and ashes and all kinds of filth as to be quite impassable to pedestrians or even to persons on horseback. The road is higher than the adjoining yards, and the filthy mud flows into the back premises and even houses in the next street. A case of typhus fever in a father of a family inhabiting one of these houses terminated fatally, and subsequently, in the same house, a case of malignant scarlatina occurred.* The City Act gives no control over the builders of houses, nor can they be compelled to sewer, drain, or prepare the ground in any way for the health and convenience of the inhabitants except as their own judgment dictates. The consequence is, that several new streets in York are unpaved and undrained, full of deep holes, ruts, and mud, and traversed with difficulty even by carts.

There are no cellar dwellings in York, unless the cellar kitchens of the more newly-built houses come under that designation; none are inhabited by the poorer classes. The latter principally occupy the large houses and their out-buildings, formerly the mansions of the wealthy, and now sublet as apartments. Houses of this kind abound in various parts of the town; very few have sewers. Beddern (or as it was formerly called Beddern *College*) a cluster of buildings originally occupied by ecclesiastics attached to the cathedral, and once a fashionable quarter, is now sublet in this manner. Of 98 families living there, 67 have only one room for all purposes, 18 two rooms, and 13 three rooms or more. One entire building is let off in single rooms. The stair-case windows are so made that they cannot open, the rooms are low and confined, the light of day almost excluded, and the walls and ground damp and undrained. The building is occupied by 16 families, two abominably filthy privies being appropriated to all, and situate, with their accompanying "ash-hole" or "bog-hole," in a little back court. As might be expected, the smell in rooms of this kind is most disgusting and oppressive. Against the back wall of a cottage there is sometimes a dung-hill, the fluid from which soaks into the house. Indeed, this circumstance is repeatedly complained of by poor people.

Table 1 in Appendix shows the number of houses occupied by 2195 families in ten districts in York, and the number sublet; also the number with one, two, and three, or more rooms respectively, and the sleeping accommodation. The latter return is, however, imperfect. The state of the dwellings is also in some degree indicated in the same table.

In the parish of St. Dennis, in which strictly accurate inquiries were made, from 8 to 11 persons slept in one room in 4½ per cent. of the families resident there; in 7½ per cent. from 6 to 8 persons slept in one room; of the total 2195 families visited by the district visitors, 26 per cent. had one room only for all purposes; the highest proportion in one room was in Beddern, being 68¾ per cent. the lowest in the parish of St. George, inhabited principally by artisans and small shopkeepers, where it was 2½ per cent. Table 1, (Appendix) shows the average number of persons in one family in each of the districts inspected. The mean average is 4·12 persons; the highest (4·61) is in the parish of St. Dennis, the lowest (3·24) in the Castlegate district.

The rent of a single room used as a residence varies from 6*d.* to 2*s.* per week; the usual rent is 1*s.* to 1*s.* 3*d.*; in some clusters of buildings the amount of weekly rent is nicely graduated according to the comfort of the room or the accomodation it affords, one room being let for 9½*d.*, while another adjoining is charged 10½*d.* per week. In 11 per cent. of 1545 dwellings reported on by the district visitors, the state of repair was

* Since writing the above a sewer has been commenced.

represented as indifferent or bad, and of 1418 dwellings, 460, or 32½ per cent. were noted as being damp and cold.

Table 2 (Appendix) shows the number of years the poorest classes remain in one residence. It will be seen that in the lowest districts nearly 27 per cent. have not resided one year, and 37 per cent. have been less than two years in their present residence. This frequent removal alone must amount to a heavy annual tax upon the income, time, and comfort of the poor. It appears to be caused in a great measure by the discomfort or unhealthiness of their previous dwellings; at least that is the reason usually given for the change of residence.

The general state of the air in the dwellings of the poorer classes, as is amply shown by the observations of the District Visitors, is bad; the courts and yards are confined, the inhabitants numerous; the privies, sewers, and drains defective, the latter, indeed, generally wanting; and yet there is usually an evident desire to keep all clean and neat as possible, even under circumstances the most unfavourable to personal and domestic cleanliness. There were some instances of extreme poverty observed in Beddern. In a yard, also, in Hungate there was a family without either bed or bedding, and in another a man, his son, aged 18, and his two daughters, aged 10 and 15, occupied one bed made up on the floor. In St. Margaret's a family of seven were found in one room with no other bed than a few shavings in a corner.

Coal is cheap in York, and may be purchased of a sufficiently good quality for from 6*s.* to 9*s.* a ton; it is the usual fuel of the people. Gas-light is extensively used in the houses and shops; but no escape is provided for the bad air which it produces.

It may be proper to mention the nuisance occasioned by the smoke from chimnies belonging to breweries, bakehouses, foundries, gas and glass-works, steam-engines, &c., as per list:—

Steam-engines	28
Glass-works	2
Iron-foundries	3
Coach-manufactories	6
Pipe-manufactories	3
Bakers	25
Confectioners	7
Brewers	14
Smiths	35
Total	123

It does not appear that the smoke is burnt in any of these except one.

The quantity of soot which falls is very great. Some idea of the amount may be learnt from the fact that a drawing-room window not having been opened for two or three months, the soot had collected between the bars just as in a chimney, the current of air passing from without into the room being loaded with and depositing the soot there as it passed through the bars. The pollution of the air from this source must be extremely great, and injurious to the health. The injury done to furniture and clothing, and the additional cost of washing, must form no inconsiderable item in the expenditure of the citizens. The total amount, on a very moderate estimate, cannot amount to less than thousands per annum.

The sites of the public school-rooms in York (30 in number) for the children of the labouring class, are mostly open, well drained, ventilated, lighted, and warmed. There are but few private schools for this class of children, and those which exist are small and very fluctuating. A list of the schools in York, and their sanatory condition, as communicated by Mr. Rowntree, is given in the Appendix (*vide* No. 12).

The public buildings are the cathedral and 23 churches, 13 chapels, a theatre, a suite of assembly rooms, concert room, a suite of banqueting rooms, the museum of the Yorkshire Philosophical Society, and several halls for holding public meetings. There are also the County Prison, the City Gaol, the Guildhall, the Lunatic Asylum, County Hospital, City Dispensary, almshouses, usually termed hospitals, &c. Their sites are indicated in the annexed map of the Ordnance Survey. The ventilation of these buildings is various; in some, especially the older, it is insufficient, as, for example, in the Workhouse and County Hospital. In the yard of the latter there is a large cesspool. Some of the almshouses have been rebuilt with some regard to this important point, as Lady Hewley's charity, Wilson's Hospital, &c. The workhouse has been improved as far, probably, as the nature of the building will admit. But the character of its ventilation may be inferred from the following remarks of the District Visitors:—"The female patients' day and night-room is ventilated through the women's infectious room;" and "the infectious room for women is ventilated through the sick aged women's day and night-room." From this it appears that those to whom pure air is of the greatest importance, namely, the sick females, have it the most impure.

The state of the parochial burying-grounds of York must have a considerable and noxious influence on the atmosphere within the churches, and on that of the city generally, and on the water. The greater number of these grounds are of extreme antiquity, and must have been buried over very often. In fact, many of them are raised above the street level from the accumulated remains of generations. That of St. Michael, Spurrier-gate (now closed), is at least three feet above the floor of the church. A few years ago the ground of St. Helen, Stonegate, was raised three feet by fresh soil in consequence of the great number of bodies placed there. York having now an excellent cemetery, a strong feeling is very

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generally expressed against the continued use of these grounds for the purposes of interment. Graves are dug in the public thoroughfares and putrescent human remains exposed; nor is it an uncommon circumstance to see bones lying about. The analysis of the water from wells near St. Cuthbert's and St. Sampson's churchyards, shows that the wells are tainted by the drainage from these burying grounds, and there can be no doubt that the air is also polluted, not only by the direct emanations, but as well from drainage from the bodies into the public sewers. Indeed, individuals have stated that they perceive the stench as they pass along the street.

In the Appendix is a table (No. 13) of the size and condition of the churchyards in 1832: of course they are much worse now than then.

York enjoys several public walks. In addition to the common lands, amounting to several hundreds of acres, possessed by the freemen of the city, and which are used, during a part of the year at least, for cricket grounds, &c., there are St. George's Fields and the New Walk planted with trees, and having seats, extending above a mile along the east bank of the river Ouse; the opposite bank of the river has also a foot-path, and towing-path along its edge, used as a public walk, and the old city ramparts, (for a length of a mile, or nearly,) have been repaired, and made into a dry flagged walk, commanding a view of the city, and the surrounding country. The grounds on the north side of the minster and the walks in the cemetery are open to the public, but admission to the gardens of the Philosophical Society is limited to members, and their families and friends, except on certain public occasions. Non-subscribers pay 1*s.* for admission. In addition to these promenades and grounds, the approaches to the city, and numerous foot-paths afford agreeable walks. The river Ouse presents great facilities in summer for aquatic excursions and rowing matches.

A convenient swimming-bath and shower and douche baths were established by a company in the year 1837, on a portion of the manor shore adjoining the grounds of the Yorkshire Philosophical Society. The annual subscription is from 5*s.* to 15*s.* per annum, and a single ticket costs 6*d.*; on Saturday afternoon the charge is 2*d.* There is no provision, however, for warm bathing (and this is generally regretted by those who appreciate its importance) except at the water-works, where the charge for a warm slipper-bath is 2*s.*, or for the season 25*s.*; for a tepid plunging bath 1*s.*, for the season 1*l.*

The rivers Ouse and Foss are both bathed in, and in summer the conduct of the bathers in the former is much complained of, by pleasure parties on the river.

Water is supplied to the city from wells and cisterns, but principally, for all purposes, from the river Ouse, by a company first established in 1677, and subsequently by Act of Parliament. The wants and wishes of the poor in those districts inspected, as made known to the District Visitors, may be found in their proper place. It appears, from the answers of the clerk of the company, to the questions of the Commission, that iron mains of 11 inches and of 3 inches, are laid in the principal streets, and lead service pipes to about 3000 houses; the total number of houses in the city being nearly 7000. The greater number of the houses supplied from the water-works have cisterns, but many of the smaller have no cisterns, and only taps in the yards.

The annual charge made by the Company appears to be about 9*d.* or 1*s.* in the pound of the rental; it varies according to the class of houses from 4*s.* to 5*l.* A six-roomed house at 13*l.* rental, pays from 8*s.* to 10*s.*, a cottage of two rooms, the rental of which is from 4*l.* to 5*l*, pays 4*s.* or 5*s.* for water supplied to a tap in the yard for a limited time every day, except Sunday. The time seems of various duration; some persons complained to the District Visitors that the water was on occasionally for 10 or 15 minutes only. The poor in the neighbourhood of the rivers get their water from thence, otherwise the water-works company have a monopoly of the supply of river-water to the city. Filters are used in private houses of the middle and higher classes, but not often by the poor, who complain of the muddy state of the water.

In the Appendix, are tables (Nos. 3 and 4,) containing the analyses of the water of the two rivers, and of springs and wells, made by Mr. Spence and Mr. White, and referred to by Mr. Harcourt. Mr. Spence states that the water of the Ouse is remarkably pure when at its summer level, containing less solid matter, in fact, than the water of either the Thames or the Clyde. In time of floods, it holds a large amount of alluvium in suspension, and is not fit for domestic use without filtration. The water of the Foss is impure, even if taken two miles above the city.

A few principal streets are watered, under the direction of the city commissioners, by water-carts supplied from the pipes of the company. No means are adopted to wash, or cleanse the streets by flooding them. There are no means, except the common fire-engine for throwing water to a height; for although a steam engine of 20-horse power, forces the water into the city, that power cannot be made available in case of fire, as the larger mains having an 11-inch bore, and the smaller only three, it is apprehended, perhaps erroneously, that the latter would burst, if the necessary pressure on the water were applied. The mains, however, are always full, and the steam-engine may be put in motion in 15 minutes at any time, and any quantity supplied from the river to all those parts of the city and suburbs to which the company's mains extend.

The sanatory condition of the population in York, may be considered under several different heads. The density and wealth in any given district will materially influence the health of the inhabitants; the two indeed are generally in an inverse ratio to each other; and with the density all the causes which aggravate the mortality of a district are increased. The employments of the population also merit special consideration. As regards the duration of life in different classes, it appears from the following table (which has been

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carefully drawn up from the mortuary registers of 1839, 1840, and 1841), that the mean age at death of the artizan class is 26½ years less than that of the gentry and professional class. Labourers in York live on the average 8¼ years less than labourers in the country.

TABLE 1.—ABSTRACT of the DEATHS in the York Registry District during the Years 1839, 1840, 1841; distinguishing the Station in Life and the Locality, whether Urban, Suburban, or Rural. Total Population of the District 47,706.

		Total Number of Deaths from 1839 to 1841, inclusive.	Per Cent. of Deaths under 15 Years of Age.	Per Cent. of Deaths from Epidemic and Contagious Diseases.	Average of all of each Class dying above 21.	Average Age of all of each Class.	Average Age of all in each District.
Town Population, York City, 29,329.	Gentry and professional persons and their families	146	23·28	11·64	64·85	48·62	32·21
	Tradesmen and their families	429	46·38	22·14	56·72	30·76	
	Artizans and their families	798	57·89	25·06	51·76	22·10	
	Persons whose condition in life is undescribed	521	34·74	11·55	57·28	35·82	
	Labourers and their families	504	56·94	21·23	54·02	23·75	
Suburban Population, 8421.	Gentry, &c., and their families	40	15·00	12·50	62·03	49·20	36·40
	Tradesmen, &c., and their families	104	30·77	14·42	55·95	39·54	
	Artizans and their families	64	54·69	23·43	46·44	20·65	
	Persons of condition undescribed	87	25·28	10·34	60·63	41·93	
	Labourers and their families	188	44·68	26·59	60·65	30·68	
Rural Population, 9956.	Gentry, landowners and their families	29	13·79	20·69	56·45	44·86	38·65
	Farmers, village tradesmen, and their families	243	32·51	19·75	59·44	39·10	
	Agricultural labourers and their families	279	40·86	15·05	55·18	31·99	
	Totals	3,432	..	..	..	..	..
	Averages	..	44·84	18·03	57·03	35·30	..

The whole Union.	Proportion of annual Deaths to the Population	1 in 41·70
	Proportion of annual Births to the Population	1 in 39·34
	General average age at death	35·30 years.

The following table exhibits the less healthiness of York, as compared with the surrounding rural districts. The average or mean age of all dying in York is 6½ years less than of those dying in the country, and the deaths from epidemics more numerous.

TABLE 2—Showing the relative Sanatory Condition of the Urban, Suburban, and Rural Districts of the York Union.

	Per Cent. Dying under 15 Years of Age.	Per Cent. of Deaths from Epidemics.	Average Age at Death.	Proportion of Annual Deaths.	Proportion of Annual Births.
In the City of York	48·49	20·00	32·21	37·77	33·87
In the Suburban Districts	37·06	19·46	36·40	55·28	52·63
In the Agricultural Districts.	35·75	17·49	38·65	51·32	45·85

The causes of the unhealthiness of York, as compared with the country, have in some degree been indicated. Bad sewerage and drainage, bad water, bad air, not only from the decomposition of refuse animal and vegetable matter, but from the crowding of the artizan class into a confined space. In addition to these noxious agencies, their employments and their workshops are often unhealthy; sickness makes them poor, and their food and clothing are consequently scanty. It is difficult to estimate the influence of all these causes on the health in York. The city is divided into wards and parishes, and in these, good streets and bad streets, open thoroughfares and gardens, and densely populated badly ventilated courts, are closely intermingled.

There is no standard by which deficient drainage can be measured. The natural drainage, as well as the sewerage, or in other words, the varying altitude of different parishes will indeed have an influence on the health of the inhabitants, and so the altitude may (though not without many exceptions) be taken as the standard. Even when two districts are closely contiguous and sewered alike, and inhabited alike, a difference in the fall, it may be inferred *à priori*, will be accompanied by a difference in the viability of the

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people in the two parishes, for the lower-lying parish will not only receive the drain water of the upper, as well as its own, but the deposit from water thus charged with impurities, will move more slowly along the sewer than the former, and therefore receive a larger quantity of foul air. Trapping the sewers will not altogether prevent the malaria escaping, as it is satisfactorily shown in Mr. Chadwick's supplement to his General Sanatory Report on the health of the labouring population of Great Britain, that water will drain into sewers through the brick-work, and if water will pass in, we may be quite sure that the air will pass out. Indeed Dr. Reid detected the escape of deleterious miasm from a grave 20 feet deep. Independently of these considerations, it is certain that in York, the low-lying districts are inhabited principally by the poor, and are really the worst sewered districts.

The site of the city of York is of a very varied character. The raised ground to the south-west bank of the river is sand and gravel, on the north-east clay and gravel. The parishes of St. Mary Bishophill, junior, St. Mary Bishophill, senior, Holy Trinity, Micklegate, and St. Martin with St. Gregory, are situate on the south-west declivity to the river, the highest ground opposite the parish church of Holy Trinity Micklegate, being 49 feet above the summer level of the river, and 65 feet above the datum plane of mean tide. At the foot of this declivity, close to, and parallel with the river, are the parishes of All Saints, North-street, St. John Micklegate, and a small part of Bishophill, senior. On the opposite side of the Ouse, are the parishes of St. Mary Castlegate; St. Michael Spurriergate; St. Martin Coney-street, St. Helen Stonegate, and St. Michael le Belfrey, the latter containing the highest point, (52 feet above the level of the sea,) on the north-east side of the Ouse. From this parish the ground declines through the parishes just mentioned, except St. Mary Castlegate, to the Ouse on one side, and through part of St. Helen, Holy Trinity Goodramgate, Holy Trinity King's-court, St. Crux, St. Saviour, St. Maurice, and St. Cuthbert, to the river Foss, on the other side. Portions of St. Sampson, All Saints Pavement, and St. Mary Castlegate, have also a declination to the Foss. The drains from the parishes of St. Dennis, St. George, St. Margaret with St. Peter-le-Willows, and St. Lawrence with St. Nicholas, empty into the Foss exclusively, and in common with the barracks, are situate on an almost level plain, backed up by a ridge of hills, similar to those on the south-west side of the city. There is a great deal of made ground between the banks of the rivers Foss and Ouse. Coney-street, in the parish of St. Martin, (*vide* map,) which runs parallel to the north-west bank of the Ouse, is raised not less than nine or ten feet above what appears to have been the surface in the time of the Romans. A regular pavement was discovered about 40 years ago, between the river and St. Helen's-square, at a depth of seven feet; and about the same time, when a deep drain was made along Newgate, a Roman street was discovered with channel tiles. When Parliament-street was built, the nest and eggs of a wild duck were found 12 feet below the surface. And there can be no doubt but that originally the whole tract of land between the Ouse and Foss, was marshy, and that a great proportion of the parishes of St. Cuthbert and St. Saviour, now thickly inhabited, was, up to a comparatively recent period, a marsh formed by the Foss. The Saxon name Peaseholm, sufficiently indicates this with regard to the former; and the church of St. Saviour was formerly called Ecclesia Sancti Salvatoris in Marisco—the church of St. Saviour in the Marsh. In fact, the whole depth of the made ground in this district has rarely been penetrated either when building or draining.

In table 5 in Appendix I have endeavoured to give data for estimating the difference in salubrity of different localities, and the causes of that difference.

For the better understanding of the subsequent tables I here subjoin the totals and averages of the whole city.

TABLE 3.

Population.	Mean altitude above the Sea in feet.	Inhabitants per rood occupied by Buildings.	Inhabitants to one birth annually.	Inhabitants to One Death annually from			Per Cent. living aged under 5 Years.	Per Cent. dying aged under 5 Years.	Per Cent. of Deaths of Artizans and Labouring Classes.	Mean Age at Death.
				All Causes.	Epidemics.	Pulmonary Diseases.				
28,952	44	37	33·87	37·77	187	181	11·76	42·16	54·39	32·21

The per centage of the total deaths which were from the artizan and labouring class in each parish, with the mean age at death, coincide approximately, as may be seen by referring to table 1 in the Appendix, with the domestic condition of the population generally in each parish, as regards ventilation, &c. The density of the population will also be observed to have a connexion with the mortality of the artizan and labouring classes and the mean age at death, but particularly when conjoined with a low altitude, or with what in the table must be considered a convertible term, namely, deficient sewerage and cleansing. The mean age at death is manifestly dependent upon the distribution of the living as to ages; but by the column showing the annual proportion of births, it will be seen that this is higher wherever *à priori* the locality would be thought unhealthy. The per centage of living and dying, aged under five years, in the families residing in such localities is of course greater, and the mean age less.

It may happen, however, that the population is not a reproductive population from a preponderance of unmarried adults. In this case, it is manifest that neither the average age nor the annual proportion of births or deaths will express the sanatory condition of

the locality; it is to meet this case, that I have added two columns showing the proportion of deaths from epidemic and pulmonary diseases. I need not here explain how much the fatality of both these cases of death is increased by deficient ventilation and miasmata. It will be seen that these two columns present the most uniform results, and have a reciprocal ratio.

A comparison of two parishes will illustrate my meaning.

TABLE 4.

	Mean Altitude.	Population to Square Rood.	Inhabitants to One Annual Birth.	Inhabitants to One Annual Death.			Mean Age at Death.	Labouring Class per Cent.*
				From all Causes.	From Epidemics.	From Pulmonary Diseases.		
Holy Trinity, King's Court	53	43	38·92	47·80	171	207·5	38·07	56
All Saints, North Street .	39	143	24·82	36·40	100	164·2	19·56	78½

* Includes artisans as well as labourers, properly so called.

All Saints North-street, it will be seen, is in every column below the mean of the city; Trinity is below the mean in one only, the mortality from epidemical diseases. The single statement that the shambles, made up of narrow streets and filthy yards, are situate in this parish, will explain the matter at once. That the prevalence of epidemical disease during the three years (1839—1841) in this parish was not accidental, is confirmed by the fact, that in common with North-street, it was one of the localities in which cholera appeared the earliest.

On comparing the altitudes with the indexes of healthiness or the contrary, it will be seen that the mean age diminishes, and the proportion of births, of deaths from all causes, and of deaths from epidemics increases as the altitude is less. Taking the deaths from epidemical and pulmonary diseases as the standard, by which the efficacy of drainage may be measured, two high parishes adjoining the Ouse and two low adjoining the Foss stand as follows.

TABLE 5.

		Population to Square Rood.	Mean Altitude.*	Inhabitants to One Death Annually.		Mean Age at Death.
				From Epidemics.	From Pulmonary Disease.	
High.	Holy Trinity, Micklegate	24	45	404	281·2	42·58
High.	St. Martin cum Gregory	32	34	213	346·2	41·89
Low.	St. Saviour	50	16	142	231·9	23·62
Low.	St. Cuthbert	40	13	03	120·1	22·47

* From the summer level of the Ouse and Foss.

There can be no doubt that deficient ventilation, even in well-drained districts, will increase the mortality from epidemical and pulmonary diseases; but it is not generally remembered that the effects of deficient drainage are not to be avoided by good ventilation. In proof of this, the following facts will probably be deemed conclusive. The village of Rufforth, near York, is very badly drained, a wide stagnant ditch passing through the village. It is situate in a slight hollow, on a level plain, bounded by Marston Moor, Askham Bogs, &c. The village of Acomb is about two miles distant from Rufforth, and is situated on an eminence, overlooking the level. Both of course are as well ventilated as country villages usually are, but Rufforth being less populous, and more agricultural, has of the two the advantage in this respect.

TABLE 6.

	Population in 1841.	Altitude in Feet.	Inhabitants Living to One Annual Death from		Mean Age at Death.
			All Causes.	Epidemics.	
Rufforth	276	61	34	69	28
Acomb	774	110	41	258	35½

The scarlatina, when epidemic in Rufforth, was so malignant as to be fatal in a few hours, and was termed by the villagers the "black" fever.

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On the other hand, the town of Birmingham is an example, in proof that a very good natural drainage may diminish the noxiousness of a dense population. The only cases of cholera that occurred in that town were imported. The centre of the borough is 475 feet above the level of the sea.

It will be seen from the table that the labouring classes reside in the lower altitudes, and that the density of the population increases also as we descend. This is most obvious in the two extremes of the scale. The intermediate parishes have varying altitudes and varying densities. Some of these, however, strikingly illustrate the effect of deficient sanatory arrangements. The parishes of St. Peter the Little, and All Saints Pavement, are contiguous and alike as regards the facilities for good drainage. In the one, there is, however, deficient drainage and narrow streets; in the other, tolerable drainage and wider streets.

The following table shows the sanatory condition of each:—

TABLE 7.

	Mean Altitude.	Population to Square Rood.	Inhabitants Living to One Death Annually.		Mean Age at Death.	Per Cent. of Deaths of Labouring Class.
			From all Causes.	From Epidemics.		
All Saints, Pavement	47	23	62·61	313·53	30·30	55·0
St. Peter the Little	47	70	44·07	172·07	25·28	58·4

So that the average duration of life for each individual living in the parish of St. Peter the Little is five years less than if he resided in the adjoining parish. It will be seen from the deaths of the labouring class, that the proportion of the living of that class is nearly the same in the two parishes. There is also a crowded churchyard in All Saints. The difference in the sanatory condition of the two parishes can only be accounted for by the bad ventilation and drainage of St. Peter the Little.

About 12 years ago, when the York Improvement Act was obtained, the site of the present market (part of which is in All Saints) was covered with streets resembling those in St. Peter the Little. We can see that the sanatory effect of that great improvement has been to raise the mean age at death considerably.

Although these results are obtained from a small population, and a limited extent of the city, there can be no reason to doubt their accuracy, but rather the contrary, for the more limited the field of the inquiry, the more precise may be the analysis. If, however, the whole city be taken, the general results are the same.

TABLE 8.

	Mean Altitude.	Population to Square Rood.	Mean Age at Death.	Ratio Dying under 5 Years to Living at the same Age.	Inhabitants to One Birth Annually	Inhabitants to One Death Annually.			Deaths of Labouring Class per Cent.
						From all Causes.	From Epidemics.	From Pulmonary Disease.	
Best drained and ventilated parishes	50	27	35·32	3·03	47·50	54·32	347·72	334·22	40·2
Intermediate parishes . .	43	40	27·79	3·86	36·53	41·41	247·20	219·70	52·5
Worst drained and ventilated parishes	33	63	22·57	3·83	26·82	32·15	129·43	153·00	62·8

It will be seen that as the altitude diminishes, the proportion of the labouring class is greater, and the mean age less. The two extremes show a difference of 12¾ years in the mean age of each individual dying. The intermediate parishes comprise every variety of site and population. The parish of Bishophill Senior, for example, varies in altitude from 54 to 26 feet. If the deaths in one of these intermediate parishes be arranged according to altitude, they are as follow:—

TABLE 9.

An Intermediate Parish.		Mean Altitude.	Inhabitants to One Annual Death		Mean Age at Death.
			From all Causes.	From Epidemics.	
Bishophill Senior	High part . .	54	43	260	27½
	Low part . .	30	41	150	24½

The same results are seen if the healthy parts of all the intermediate districts be separated from the unhealthy.

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TABLE 10.

	Mean Altitude.	Population.	Inhabitants to One Annual Death.		Mean Age at Death.
			From all Causes.	From Epidemics.	
Best conditioned portion of the intermediate parishes	49	4858	43·91	323·86	30·48
Worst conditioned portion of the intermediate parishes	38	6871	37·08	177·08	27·35

To show further the connexion between deficient sanatory arrangements and disease, the localities of the cases attended by the medical officers of the dispensary for the five years, 1839-43, have been tabulated; and it will be seen that the annual expenditure of this charity is almost exclusively in the badly drained and badly ventilated parts of the city. In the higher altitudes and well conditioned districts, the cases of fever, &c., were only 15 per 1000; in Walmgate district, east of the Foss, there were 73 per 1000; in the Hungate district, on the west bank of the Foss, the cases averaged 91 per 1000. (See Table 6, App.) The tabulation of the residence of the poor attended by the medical officers of the Union shows, also, that the medical charge on the poor's rates is principally from the ill-conditioned districts. The residences of 349 persons who received sick relief from six benefit societies during the year 1843 are arranged below in a tabular form with similar results:—54 members, living on the west bank of the Foss, received 3*l.* 2*s.* each; 40 persons, living in the best-conditioned districts, were paid only 1*l.* 7*s.* 10*d.* each. These numbers comprise only a few of the sick relieved by these societies, as the following enumeration of those from which no returns have been obtained will show.

	Courts or Lodges.
Independent Order of Odd Fellows	8
Grand United Order of Odd Fellows	3
Ancient Order of Foresters	5
Ancient Order of Free Gardeners	5
Ancient Order of the Ark	4
Ancient Order of the Druids	1
Friendly Benefit Societies	8
Total	34

The cost of deficient sanatory regulations to the provident poor is a rule of three question:—If 167*l.* 6*s.* be expended in the badly-drained districts, on sick members annually, by six friendly societies, how much will 34 expend?

TABLE 11.—Showing the Number of Sick Members of Six Benefit Societies in Six Districts, during the Year 1843; the Duration of Sickness; and the Allowance received.*

District.†	Mean Altitude of District in Feet.	Number Sick.	Per Cent. Sick to the Total of 2385 Members.	Average Duration of Sick-Pay to Each in Weeks.	Sums Paid per Head during Sickness.
					£. s. d.
1. Streets and courts (Hungate, &c.), adjoining the west bank of the river Foss	29	54	·022	15·27	3 2 0
2. Walmgate, and its courts and lanes east of the Foss	31	43	·017	7·93	2 4 8
3. Streets and courts (North-street, &c.), adjoining the banks of the river Ouse	34	71	·029	9·50	2 6 8
4. Old streets and courts, imperfectly paved and drained	44	62	·026	9·24	2 6 7
5. New streets and courts, imperfectly paved and drained	46	79	·033	7·87	1 19 4
6. Streets not included in the preceding, comparatively well-drained and paved	53	40	·016	5·87	1 7 10
Totals and Means	..	349	·146	9·00	2 5 0

* The benefit societies are the following:—The York Female Benefit Club; the York Amicable Society; the York Female Friendly Society; the Lord Dundas' Union; the New Union Benefit Society; the York Brotherly Society.

† For the limits and sanatory condition of these districts, see the Dispensary Table in Appendix No. 6.

It is impossible to ascertain the amount of losses of rent and rates from the poorer classes of tenements by interruptions in the employment of the inmates, and the expenses occasioned by sickness and mortality. The subjoined Table, is a return from the Union, in which particulars bearing on this point are stated:—

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TABLE 12.—RETURN from the Board of Guardians of the York Union.

	Number of Husbands or Fathers who have died below 60 Years of Age.	Average Age of the Husband or Father at Death.	Average Age of Period of Dependence.	Total Amount of Relief given since the commencement of the Relief.
		Years.		
Total number of persons at present on the out-door or in-door relief list, relieved on account of claims for relief arising from widowhood .	176	43	Average period of dependence actually experienced 7½	Not known.
Total number of children belonging to widows in receipt of parochial relief	. .	. .	. .	. .
Total number of children relieved whose fathers and mothers are dead	. .	. .	. .	. .

TABLE 13.

	Weekly Cost.	Annual Charge.
	£. s. d.	£. s. d.
1. Total amount of relief given to persons at present dependent on parochial relief	188 0 0	..
Widows 303		
Children of widows . 246	. . . . .	59 4 11	3080 15 8
Orphans 41	. . . . .	28 6 9	1474 11 0
	..	4555 6 8

TABLE 14.

	Year ended Lady-day, 1839.		Year ended Lady-day, 1840.		Year ended Lady-day, 1841.	
	Cases.	Money expended.	Cases.	Money expended.	Cases.	Money expended.
		£. s. d.		£. s. d.		£. s. d.
1. Total number of cases which have been attended by the medical officers of the Union	606	241 6 0	553	172 10 0	513	171 0 0
2. Total number of cases in which support has been given on account of sickness during the last three years	122	. .	229	. .	187	..
3. Number of cases in which coffins have been given	4	2 5 6	7	5 6 6	6	3 2 6
4. Total number of cases in which the whole expense of interment has been provided at the public charge . .	45	63 0 0	51	54 15 1	45	55 14 9

The total annual charge on the Union for the year ending March, 1843, being 11,634*l.*, the total average annual expense of cases of widowhood and orphanage upon the Union is nearly 30 per cent. of the total annual expenditure. This is, of course, but a very small proportion of the cost to the community of deficient sanatory arrangements. If the distress and destitution experienced by widows and orphans in private could be accurately estimated, the amount would be incredibly great.

Medical advice is given gratuitously to a great extent by the medical profession generally, and also by the City Dispensary and County Hospital. The latter takes in patients from any part of the county: the Medical Staff prescribe also for the out-patients of the charity, the greater part of whom reside in York. The advantages of the dispensary are confined almost entirely to the sick poor of the city; those unable to attend at the institution are visited at their homes. There is also a small district dispensary: it is not, however, a public institution.

The following is the average annual expenditure and number of patients of the two medical charities:—

TABLE 15.

	Average Annual Number of Patients for Five Years.	Average Annual Expenditure of Five Years.
		£.
York County Hospital . . .	974	1496
York City Dispensary . . .	2119	574

York having had for many centuries a municipal government, and as a commercial and military locality having partaken in all the social changes of the kingdom from time

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immemorial, it is an interesting question to determine how far the better, although unsystematic sanatory regulations of later years, have been followed:—1st, By a concomitant improvement in the general health; and, 2ndly, By a greater immunity from epidemics. The former may be inquired into in various ways. First, the general rate of mortality at successive periods can be compared with that of the present time, and the mean age at death in each parish with the general mean.

Drake, the historian of York, has given the number of births and burials for seven years, from August 5, 1728, to August 5, 1735; during this period, the average annual excess of burials above births was 98; and calculating the then population in the ratio of 1 birth to 27 inhabitants (the ratio of all large cities), the deaths were 1 in 21·77, or 498 annually to 10,800.

In 1777, Dr. White of York communicated a paper to the Royal Society of London, in which he compared the mortality of York for the seven years from 1770 to 1776 with the tables of Drake. He estimated the population of the city by two different methods, at 12,798, being an increase of 2000, in the years subsequent to Drake's publication; but the annual average number of deaths had decreased nearly 45 annually, and the births now exceeded the deaths by 21 annually; the population living to one death annually having risen to 28·22.

Dr. White attributes this great improvement in 45 years (one-third fewer dying in the latter than in the former period) partly to the introduction of inoculation, and the improvements in medicine, and in the hygiene as well of infants as adults; partly to the local improvements in the city during the preceding years. "The streets," he says, "have been widened in many places by taking down a number of old houses built in such a manner as almost to meet at the upper stories, by which the sun and air were almost excluded from the streets and inferior apartments. They have also been new paved, additional drains made, and by the present method of conducting the rain from the houses, are become much drier and cleaner than formerly. The erection of the locks, about four miles below the city, has been a great advantage to it, for before this, the river was frequently very low, leaving quantities of sludge and dirt in the very heart of the city, also the filth of the common sewers, which it was unable to wash away." *Phil. Trans.* vol. lxxii.

The subjoined table presents a view of the gradual and steady improvement in the sanatory condition of the city from the time of Drake to the years 1826—1831 when it appears to have retrograded. It is remarkable, however, that the average age has varied so little. The deaths in 1781 were 1 in 28, and average age at death 28 years; in 1839—41, the annual proportion of deaths had fallen to 1 in 37, and the mean duration of life risen to 32 years. The health of the city appears much more deteriorated in 1841 than it really was; that year was an epidemic year. The period for which the mortality was calculated is shorter, and the mode in which the previous results were obtained, an average of five years being taken as the mortality of the fifth, would necessarily render them rather more favourable than they really were.

TABLE 16.—Showing the progressive improvement in the Health of York since the commencement of the last Century.

Period.	Number of Deaths.	Population.	Per Centage of Persons Dying *under* 5 Years of Age.	Per Centage of Persons Dying *above* 5 Years.	Per Centage of Persons Buried aged above 70.	Average Age of Persons Buried.	Inhabitants to One Death.
*a*1728 to 1785	3,486	10,800	..	..	..	..	21·77
*b*1770 to 1781	..	12,798	38·6	61·3	16·5	28·34	28·22
1781 to 1791	4,388	14,079	37·92	62·08	14·67	30·52	32·08
1791 to 1801	4,991	16,145	37·13	62·87	14·44	30·64	32·33
1801 to 1806	2,538	17,181	35·83	64·17	13·54	29·36	33·84
1806 to 1811	2,592	18,217	37·30	62·70	15·55	30·90	35·72
1811 to 1816	2,395	19,502	33·84	66·16	17·71	30·47	40·70
1816 to 1821	2,557	20,787	35·88	64·12	16·62	31·4	40·56
1821 to 1826	2,643	23,523	36·23	63·77	15·82	32·56	44·51
1826 to 1831	3,033	26,260	36·87	63·13	13·04	29·39	43·30
1839 to 1841	2,398	30,152	42·16	57·84	..	32·21	37·77

*** The average annual mortality of each of the periods in this table is considered as representing the mortality of the last year of the period, on the population of which the ratio of persons living, to one death annually, is calculated. The per centages are from 26,000 deaths in the parish registers.

a. This estimate is on data from Drake's "History of York."

b. From data published by Dr. White, of York, in the 72nd volume of the "Philosophical Transactions."

On comparing the mortality of the several parishes in York (*vide* Tables 7, 8, App.), as deduced from the entries in the parish registers from 1778 to 1831, we find that their sanatory condition during that period was generally analogous to their present. The two parishes on the high ground on the south-west bank of the river are at the top of the list; the two lying close to the margin of the river are at the bottom. The following table will show this more clearly; and also that while in the former the sanatory condition has improved, in the latter it has remained stationary or deteriorated:—

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TABLE 17.—Showing the Mortality in Two High and Two Low Parishes for the periods extending from 1778 to 1831, 1791 to 1801, and for the Three Years 1839 to 1841.

	Per Cent. Dying Aged under 5 Years.	Mean Age at Death.
Holy Trinity, Micklegate; mean altitude 45 feet.		
From 1778 to 1831	27·89	33·86
1791 to 1801	28·04	32·90
1839 to 1841	17·39	42·58
St. Martin cum Gregory; mean altitude 34 feet.		
From 1777 to 1831	27·89	34·18
1791 to 1801	33·60	34·00
1839 to 1841	32·16	41·89
All Saints, North-street; mean altitude 23 feet.		
From 1778 to 1831	47·12	25·30
1791 to 1801	44·00	29·00
1839 to 1841	55·10	19·56
St. John, Micklegate; mean altitude 17 feet.		
From 1778 to 1831	49·17	22·74
1791 to 1801	55·90	20·30
1839 to 1841	50·45	22·87

Although the data derived from the parish registers are not to be relied on so certainly as those from the modern registers, the results are so constant, as to leave little doubt of their general accuracy. In some of the other parishes where a similar uniformity of sanatory condition has not been observed, it would appear that the deterioration or improvement is attributable to the increased or diminished density of the population. One or two parishes formerly in a great degree suburban contain now an increased civic population; while in others, in the heart of the city, old buildings have been taken down, the streets widened, and the population diminished. The following tables will illustrate these views:—

TABLE 18.—RATE of MORTALITY at Three Periods in Two Parishes, with a Decreasing Population.

Ancient City Parishes.	Population in Census Year.	Per Cent. Dying Aged under 5 Years.	Mean Age at Death.
Parish of St. Helen.			
From 1816 to 1821	678	51·7	23·4
1826 to 1831	707	41·9	18·7
1839 to 1841	607	23·8	39·9
Parish of St. Michael, Spurriergate.			
From 1816 to 1821	593	39·8	28·8
1826 to 1831	645	46·1	22·1
1839 to 1841	499	37·03	33·3

These results, however, being derived from the parish registers, must be considered as approximative only; as also those in the following table.

TABLE 19.—RATE of MORTALITY at Three Periods in Two Parishes, with an Increasing Population.

Parishes in part suburban.	Population in Census Year.	Per Cent. Dying Aged under 5 Years.	Mean Age at Death.
Parish of St. Saviour.			
From 1816 to 1821	1172	29·6	35·4
1826 to 1831	1348	35·4	28·2
1839 to 1841	2028	53·0	25·4
Parish of St. Cuthbert.			
From 1816 to 1821	820	35·8	34·1
1826 to 1831	1797	40·2	30·1
1839 to 1841	1995	53·6	28·8

With regard to the second mode of comparing the past and present salubrity of York, it is probable that the mortality from the exanthematous epidemics, if it could be ascertained from the parish registers (as I think it might be), would correspond with the

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general mortality. The pestilential epidemics certainly have this correspondence. The last of this kind from which York suffered was the cholera. In table 11 in Appendix I have shown the localities of 145 deaths from that disease out of 185 which occurred in the whole city. It will be seen, that it was fatal to the people in proportion to the deficient drainage of their locality. I also add a historical sketch of the epidemics of York, commencing with those of the middle ages. From this, it is manifest, that the frightful mortality of these plagues and "visitations," as they were termed, was almost altogether dependent on the malaria generated in the city, partly from absolute uncleanliness, partly from deficient sewerage and drainage. It also shows that the seasons of prevalence and the localities of previous epidemics, (the plague in 1551, the plague of 1604, and the cholera of 1832), are, to a great extent, identical with those in which they still flourish in a mitigated form, although the insalubrious localities now principally occupied by the poor were then the residences of the wealthier classes of society.

The means requisite to be adopted for improving the sanatory condition of the labouring classes in York, are, I presume, sufficiently obvious from the details in the two Reports and the Appendix. A thorough, systematic, and provident application of the best medical and physical science to the architecture, drainage and sewerage, and the hydraulics generally of towns, would, without question, be the cheapest eventually, although possibly the most costly at the outset. As some of the causes of insalubrity remain yet to be ascertained, and as the registries of births and deaths must constitute the basis of all sanatory inquiries, it would be well to secure a more accurate entry of the cause of death by a systematic application of medical science to registration.

York, March, 1844. THOMAS LAYCOCK, M.D.

APPENDIX.

No 1.—A Table showing the Domestic Accommodation in 2,195 Families, principally of the Poorer Class, and resident in York, with the Average Number of Persons to each Family in the Districts named, and the per cent. with One Room only.

Name of Parish, or District Inspected.	Total of Family in each.	Numbers of Population at Three Ages.			Total Population in Each.	Numbers Sleeping in One Room.			Number of Houses.		Number of Families having			Per Cent. with 1 Room only.	State of Dwellings Examined.						Average Number of Individuals in each Family.
		Under 5 Years old.	Above 5. Under 15.	Aged 15, and above.		8 to 11 Persons.	6 to 8 Persons.	4 to 6 Persons.	Sublet.	Not Sublet.	1 Room only.	2 Rooms.	3 or more Rooms.		Good.	Tolerable.	Indifferent.	Bad.	Warm and dry.	Damp and Cold.	
North-street and Tanner-row .	174	122	164	419	705	6	4	6	21	102	55	63	56	32	31	104	17	5	32	40	4·04
Skeldergate, and its Courts. .	228	117	164	545	826	3	7	22	31	57	104	56	68	45½	..	..	..	..	..	..	3·61
Castlegate	186	103	149	392	644	..	3	13	21	106	89	66	31	48	42	133	7	4	..	..	3·24
Marygate (without Workhouse)	77	51	56	190	297	..	..	9	6	61	17	24	36	22	53	2	1	20	32	45	3·85
Beddern	98	47	73	212	332	..	4	16	14	18	67	18	13	68½	6	66	5	21	67	31	3·35
Parish of St. Cuthbert . . .	265	173	226	658	1,057	..	3	26	27	178	67	104	94	40	83	102	7	33	121	122	3·98
,, St. Saviour . . .	391	294	358	899	1,551	..	..	60	45	264	78	177	136	20	261	98	8	17	247	88	3·96
,, St. Dennis. . . .	279	200	138	849	1,287	12	20	41	288 dwellings.		76	92	111	29	..	..	..	..	..	..	4·61
,, St. George . .	182	147	187	419	753	..	..	5	11	166	4	76	102	2½	..	..	3	1	150	24	4·13
,, St. Margaret, with St. Peter-le-Willows . . .	415	271	386	952	1,609	3	1	24	26	282	116	170	129	28	270	114	13	18	309	110	3·87
Totals	2,195	1,425	2,001	5,535	9,061	24	42	222	202	1,434	573	846	776	26	746	619	61	119	958	460	4·12

No. 2.—Table showing the Time, 2,016 Families, principally of the Labouring Class, residing in York, lived in their present Residences.

District or Parish.	Time lived in present Residence in Years.										
	Number of Families.	Under 1 Year.	1 to 2	2 to 5	5 to 10	10 to 15	15 to 20	20 and above.	Not Stated.	Per Cent. with One Room.	Per Cent. under One Year.
North-street . .	97	24	12	17	21	5	3	15	..	40½	24·8
Tanner-row . .	77	7	9	23	22	10	2	4	..	20½	9·0
Skeldergate . .	228	46	21	44	35	26	12	21	23	45½	20·1
Beddern . . .	98	22	2	39	15	7	3	10	..	68	22·4
St. Margaret with St. Peter-le-Willows.	415	126	45	82	88	32	13	28	1	28	30·3
St. George . .	182	53	27	37	28	16	12	0	9	2⅓	29·1
Marygate . . .	77	7	10	21	17	7	4	8	3	22	9·0
St. Cuthbert . .	265	52	31	56	53	30	9	29	4	40	19·6
St. Saviour . .	391	94	46	86	85	26	8	24	22	20	24·0
The Water-lanes .	186	35	14	53	30	20	9	16	9	48	18·8
Totals and Averages	2,016	466	217	458	394	179	75	155	71	26	23·1

No. 3.—A TABLE of the Contents of Water from the River Ouse, at Lendal Tower, and from Fourteen of the Springs in and near York. The analyses of the three last were made by Mr. White, Chemist, York, the others by Mr. Spence.

Designation of the River or Spring.	Quantities of Gases in One Imperial Gallon.				Solid Contents per Gallon.	Carbonates of			Sulphates of			Muriates of			Nitrates of Lime, Soda, and Magnesia.	Silica.	Remarks.
	Total per Gallon.	Carbonic Acid.	Oxygen.	Nitrogen, &c.		Lime.	Magnesia.	Iron.	Lime.	Magnesia.	Soda.	Lime.	Soda.	Potash.			
	Cub. In.	Cub. In.	Cub. In.	Cub. In.	Grains.	Grains.	Grains.	Grains.	Grains.	Grains.	Grains.	Grains.	Grains.	Grains.	Grains.	Grains.	
The River Ouse, at Lendal Tower	10·4	1·9	1·6	6·9	9	3·12	1·20	·04	2·00	·70	..	..	·90	·12	. . .	·02	Vegetable matter ·90, and traces of ammonia. Clear and palatable.
The Lady Well, New Walk	23·6	14·3	2·2	7·1	33	14·25	4·20	·20	7·50	..	·50	..	2·60	..	Lime and Soda. 2·50	1·25	Clear and palatable.
St. Dunstan's Well, near the Glass Works	21·4	12·1	1·0	8·3	61	12·00	12·00	·10	20·00	6·70	..	..	6·20	·20	Lime and Magnesia. 3·50	·30	Ditto.
The Garden Well, Fishergate Postern	24·0	16·7	1·3	6·0	78	18·70	5·00	·40	32·00	..	·20	5·60	6·40	..	Lime and Soda. 8·10	1·60	Ditto.
The Pump, Lawrence-street	24·0	14·7	1·8	7·5	61	12·00	8·50	·20	18·00	..	5·00	2·00	8·20	1·80	Lime and Soda. 4·50	·80	Ditto.
Ditto, beyond Layerthorpe Bridge	31·3	22·5	1·4	7·4	38	15·70	8·00	·05	3·30	..	2·00	..	8·25	..	Soda. ·50	·20	Ditto.
Ditto, within the Yorkshire Museum	10·7	3·6	·9	6·2	25	2·20	3·55	·15	6·40	6·70	..	..	4·00	·80	Soda. 1·20	A trace.	Ditto.
Ditto, east end of the Minster Yard	34·7	25·4	1·8	7·5	122	18·50	11·05	·55	25·00	..	12·80	..	6·70	·60	Soda. 46·20	·60	Ditto.
Ditto, Middleton's Hospital, Skeldergate	20·9	12·6	·7	7·6	107	6·40	19·60	·60	48·90	..	14·00	1·60	8·00	4·40	Soda. 3·40	·10	Ditto.
Ditto, Windmill Inn, Blossom-street	15·3	6·6	1·1	7·6	78	6·00	25·00	·30	28·80	1·20	..	Magnes. 7·00	1·00	1·00	Magnesia. 7·50	·20	Ditto.
Ditto, Burton Stone, Clifton	20·9	13·3	·5	7·1	75	23·40	12·60	·30	20·00	..	2·00	1·80	4·80	3·40	Lime and Soda. 6·40	·30	Ditto.
Ditto, Dr. Simpson's, Gray's-court	26·8	18·3	1·4	7·1	68	14·50	9·50	·40	23·90	10·25	..	·40	6·10	..	Lime, Soda, and Magnesia. 2·45	·50	Ditto.
Ditto, near St. Cuthbert's Churchyard	29·0	18·0	1·5	9·5	49·41	14·20	7·5	A trace.	8·21	..	1·15	1·2	6·15	..	Nitrate of Lime. 6·15	2·60	Organic matter 2·25. Ammonia extremely appreciable.
Ditto, in Layerthorpe—Wilson's Yard	30·4	23·0	1·0	6·4	43·34	16·0	7·10	A trace.	7·6	..	2·0	1·5	7·0	..	Nitrate of Lime. 1·0	1·14	A trace.
Messrs. Atkinson's Pump, Micklegate	15·0	8·0	1·0	6·0	70·80	12·10	18·6	A trace.	30·5	2·2	2·15	..	5·25	..	. .	..	. . .

NOTE.—Mr. White remarks that, on evaporating an imperial gallon of the water from the well near St. Cuthbert's churchyard, when it was reduced to about three quarts, the existence of organic matter was rendered extremely evident on the surface; and the ordinary tests for ammonia indicated its presence most strikingly. To be perfectly satisfied that no fallacy existed, Mr. White repeated the experiment; and each time with a similar result. Mr. Spence found the water from a pump near St. Sampson's churchyard to become quite urinous, when concentrated.

No. 4.—A TABLE of the Earthy and Saline Contents of Water from the River Foss, near Yearsley Bridge, and from Eleven of the Springs in and near York. The Analyses are by Mr. Spence, Chemist, York.

Designation of the River or Spring.	Solid Contents per Gallon.	Carbonates of Lime, Magnesia, and Iron.	Sulphate of Lime with Silica.	Neutral Salts of		Remarks.
	Grains.	Grains.	Grains.		Grs.	
The River Foss, at Yearsley Bridge	17	9·00	3·50	Soda	2·50	Vegetable matter, 2·00. Traces of sulphurets, animal matter, and ammonia. Clear, but foul and unpalatable.
The Pump, York County Hospital	50	28·50	11·00	Soda and Potash	10·50	Clear and palatable.
Ditto, York County Lunatic Asylum	30	22·00	3·10	Soda	4·90	Traces of vegetable matter. Clear and palatable.
Ditto, Retreat, Garrow-hill	61	27·20	18·20	Lime and Soda	15·60	Clear and palatable.
Ditto, Holdgate	45	29·00	8·00	Soda and Potash	8·00	Traces of vegetable and animal matter. Clear and palatable.
Ditto, Acomb, Sand-hill	25	14·00	5·00	Ditto	6·00	Clear and palatable.
Ditto, Dringhouses, Hick's	95	30·00	27·00	Ditto	38·00	Ditto.
Ditto, Fulford, Wodson's	40	24·00	9·00	Ditto	7·00	Ditto.
Ditto, Monk-Bar, Cobb's	123	37·00	55·00	Ditto	31·00	Ditto.
Ditto, Walmgate-Bar, Friend's School	45	31·00	10·00	Lime and Soda	4·00	Ditto.
Ditto, New Walk Terrace, No. 1	36	12·00	15·00	Ditto	9·00	Ditto.
Ditto, Mount Parade, No. 4	50	36·00	10·00	Ditto	4·00	Ditto.

No. 5.—A SANATORY TABLE for York; calculated on the Census of 1841, and the Entries of Deaths in the Registries of the York District during 1839, 1840, 1841.

PARISH.	Population in 1841.	Mean Altitude.	Inhabitants per Rood.	Inhabitants to One Birth Annually.	Inhabitants to One Death Annually.			Per Cent. living aged under 5 Years.	Per Cent. dying aged under 5 Years.	Per Cent. of Deaths of Labourers.	Per Cent. of Deaths of Artizans.	Average Age at Death, 1839–40–41.	Difference above or below the General Mean age.	Difference above and below the Mean Ratio of Deaths.	Difference of Epidemic Ratio.
					From all Causes.	From Epidemics.	From Pulmonary Diseases.								
Holy Trinity, Micklegate	1,212	61	24	84·75	52·60	404	281·8	9·04	17·39	8·7	24·5	42·58	+10·37	+15	+217
St. Martin with St. Gregory	554	50	32	49·02	44·93	213	346·2	7·40	32·16	24·3	18·9	41·89	+9·68	3	+27
St. Helen, Stonegate	607	48	38	45·63	43·35	360	404·3	8·40	23·80	11·9	21·4	39·95	+7·74	+6	+177
Holy Trinity, King's-court	685	53	43	38·92	47·80	171	207·5	9·05	34·88	16·2	39·5	38·07	+5·86	+10	−16
St. Martin-le-Grand	553	44	30	50·27	48·83	332	184·3	7·23	26·47	8·8	1·4	37·18	+4·97	+8	+122
Minster Yard	542	54	16	(a)	95·75	821	416·9	9·59	35·29	5·8	41·01	35·47	+3·26	+58	+614
St. Giles (d)	1,258	48	31	43·37	39·81	358	147·2	10·60	29·63	6·1	34·5	35·30	+3·09	+3	+171
St. Nicholas	182	..	19	45·5	54·65	(e)	606·6	7·18	20·08	10·0	20·0	34·30	+2·09	+17	..
St. Michael, Spurriergate	499	40	41	32·67	27·72	150	249·5	9·62	37·03	35·1	18·8	33·35	+1·14	−10	−18
* St. Maurice (f)	1,424	40	22	36·37	42·72	356	178·0	13·11	33·00	20·0	27·0	32·54	+0·33	+5	+169
St. Mary, Bishophill, Junior	1,757	48	35	39·39	37·38	210	125·5	12·85	31·91	17·7	24·1	31·51	−0·70	par	+23
St. John, Delpike	351	47	62	28·53	23·4	117	117·0	10·08	46·66	17·7	37·7	30·95	−1·26	−14	−70
All Saints, Pavement	417	47	23	33·9	62·61	313	1390·0	10·09	40·00	10·0	45·0	30·30	−1·91	+15	+126
St. Wilfrid and Mint Yard	356	50	13	44·59	75·96	357	593·3	6·46	35·55	5·5	22·2	30·18	−2·03	−38	+180
St. Mary, Castlegate	952	36	42	34·69	39·49	286	151·1	11·02	47·29	43·2	27·2	29·69	−2·52	−7	+98
St. Olave, Marygate (g)	563	46	39	19·68	28·93	175	154·3	12·09	45·83	38·4	26·07	29·35	−2·86	−2	−13
St. Michael le Belfrey	1,218	54	32	35·07	37·00	143	287·9	9·37	43·87	15·3	25·5	28·27	−3·94	par	−45
* St. Lawrence	981	42	22	32·73	40·32	737	105·4	13·25	39·72	26·02	20·5	27·31	−4·90	+3	+550
St. Sampson	761	52	38	43·23	53·10	254	253·6	10·77	46·51	9·3	27·9	27·09	−5·12	+16	+66
St. Mary, Bishophill, Senior	1,123	40	31	34·44	41·05	196	153·8	12·91	40·24	19·5	34·1	26·61	−5·60	+4	+9
* All Saints Peaseholm	373	34	33	(b)	48·66	225	286·1	14·20	47·82	4·3	60·8	26·47	−5·74	+11	+37
* St. Margaret	1,207	37	50	25·68	27·62	125	165·3	13·58	47·69	21·8	33·8	25·94	−6·27	−10	−63
St. Peter the Little	573	47	70	28·65	44·07	172	286·5	11·69	43·59	20 2	38·4	25·28	−6·93	+7	−15
* Beddern	368	48	59	a29·13	27·06	110	102·2	12·22	52·50	40·0	15·0	24·12	−8·09	−10	−77
* St. Andrew	318	44	33	43·56	28·95	318	96·0	8·80	44·11	11·7	38·2	24·00	−8·21	−9	+131
Holy Trinity, Goodramgate	551	52	46	28·11	44·59	275	183·6	15·24	45·94	24·3	35·1	23·89	−8·32	+7	+88
* St. Saviour	1,995	39	50	29·51	37·22	142	231·9	13·95	57·87	16·8	48·7	23·62	−8·59	par	−45
* St. Crux	910	43	38	57·38	45·5	227	211·6	10·10	45·0	18·3	31·6	23·26	−8·95	+8	+268
St. John, Micklegate	1,026	33	131	29·31	30·78	114	132·2	11·98	50·45	29·7	27·9	22·87	−9·34	−7	−73
* St. Cuthbert	1,138	36	40	25·06	25·67	103	120·1	14·70	57·94	24·03	34·8	22·47	−9·74	−12	−84
* St. Dennis	1,314	35	38	32·57	36·18	172	146·0	12·25	52·29	24·7	28·4	21·36	−10·85	−1	−15
* St. Helen-on-the-Walls	444	40	35	(b)	66·66	334	740·0	14·18	57·89	26·3	47·3	19·52	−12·69	+29	+146
All Saints, North-street	1,199	39	143	24·82	36·40	100	164·2	14·76	55·10	23·4	55·1	19·56	−12·65	−1	−88
* St. Peter-le-Willows	497	39	40	27·89	27·61	93	115·5	16·70	59·25	18·5	57·3	19·9	−13·12	−10	−94
* St. George	1,024	37	40	(c)	38·88	140	147·7	15·13	60·67	14·6	61·7	18·07	−14·14	+1	−48
Total and Averages	28,932	44	37	33·87	37·77	187	181·	11·76	42·16	21·68	33·36	32·21	..	..	..

(a) Minster Yard and Beddern, (b) All Saints Peaseholm, St. Cuthbert, and St. Helen-on-the-Walls, and (c) St. Dennis and St. George are respectively united. No return of the births in the parish of St. George could be obtained.
(d) Exclusive of the asylum. (e) No deaths of this class. (f) Exclusive of the hospital. (g) Exclusive of the workhouse.

Note.—The parishes which are marked * have a declination exclusively to the Foss; and as the level of that river is 7 feet higher than the Ouse, their true drainage altitude = the mean altitude − 7; thus the true drainage altitude of St. George is 30, or 37−7.

No. 6.—TABLE showing the Distribution of the Sick attended by the Medical Officers of the York Dispensary in 1839, 1840, 1841, 1842, and 1843, and by the Medical Officers of the Union in 1843; marking the Districts with a dense and poor Population, and deficient Drainage.

	Population.	Number attended		Diseases.					Per Centage of all Diseases to the Population.	Per Centage of			Deaths from Cholera in York, 1832.
				Epidemic and Endemic.		Sporadic.							
		Under 5.	Above 5, and not stated.	Fever, Diarrhœa, and Dysentery.	Others of this Class.	Diseases of the Chest.	Acute Diseases.	Chronic Diseases.		Fever, &c.	Other Epidemics.	Diseases of Chest.	
No. 1.—New streets and courts partially or wholly unpaved or undrained.													
Attended by the Dispensary, 1839, 1840, 1841, 1842, and 1843	4,206	78	1,125	153	69	223	114	644	·286	·036	·016	·053	8
Attended by the Medical Officers of the Union, 1843		2	14	..	..	..	7	9	·003	..	..	..	..
No. 2.—Old streets and courts partially paved and only partially drained, not adjoining the river.													
(a) Attended by the Dispensary	3,537	102	1,020	129	106	242	137	508	·317	·036	·029	·068	22
(a) Attended by the Medical Officers of the Union		6	49	5	5	3	10	32	·015	..	..	..	..
(b) Attended by the Dispensary	2,028	74	844	121	56	206	89	446	·452	·054	·022	·101	12
(b) Attended by the Medical Officers of the Union		11	108	10	2	20	12	75	·053	..	..	..	..
No. 3.—Streets defectively drained, and adjoining the river Ouse.													
(a) Attended by the Dispensary	1,116	53	350	52	41	78	57	175	·361	·046	·036	·069	18
(a) Attended by the Medical Officers of the Union		4	51	..	..	..	20	35	·049	..	..	..	..
(b) Attended by the Dispensary	1,475	59	509	84	34	107	58	285	·385	·056	·023	·072	6
(b) Attended by the Medical Officers of the Union		..	24	..	..	..	6	18	·017	..	..	..	..
(c) Attended by the Dispensary	1,104	45	415	57	29	80	50	244	·417	·051	·026	·072	19
(c) Attended by the Medical Officers of the Union		3	12	4	..	1	1	9	·013	..	..	..	..
(d) Attended by the Dispensary	522	30	199	34	17	51	26	101	·438	·065	·032	·097	12
(d) Attended by the Medical Officers of the Union		4	22	7	..	5	1	13	·049	..	..	..	..
No. 4.—Streets defectively drained, and adjoining the west bank of the river Foss.													
Attended by the Dispensary	2,934	131	1,281	269	112	259	135	637	·481	·091	·038	·088	22
Attended by the Medical Officers of the Union		13	97	1	23	..	46	40	·0402	..	..	..	..
No. 5.—Walmgate and its yards, on the east side of the Foss.													
Attended by the Dispensary	3,905	125	1,371	286	82	336	97	695	·383	·073	·02	·085	15
Attended by the Medical Officers of the Union		24	150	..	25	..	96	53	·044	..	..	..	..
No. 6.—The streets not named, generally well drained and paved.													
Attended by the Dispensary	6,603	53	792	102	44	133	73	493	·127	·015	·006	·02	11
Attended by the Medical Officers of the Union		..	18	..	..	3	2	13	·002	..	..	..	..
Totals and averages	27,430	817	8,451						·338				145

No. 1 includes George-street, Longclose-lane, Hope-street, Ebenezer-place, Brunswick-place, Rosemary-place, Bishop-hill, St. Mary's row, Clementhorp; Nunnery-lane, including Dove-street, Swann-street, and Queen-street; Layerthorp, Bilton-street, Redeness-street, Lord-mayor's-walk, the Groves, Penley-street, Pilgrim-street, Clarence-street, Bootham, Bootham-row, and Bootham-square.

No. 2.—(a) The north-east of cathedral, including Gilly-gate, Aldwark, St. Andrew-gate, Beddern, Ogleforth, Goodram-gate, College-street, Peter-gate, and Collier-gate.
(b) The south and south-west of cathedral, including Minster-yard, Grape-lane, Swinegate, Stonegate, Newgate, Jubber-gate, Coffee-yard, Shambles, Finkle-street, Church-street, and Davy-gate.

No. 3.—(a) Skelder-gate, its courts, &c., including Albion-street, Fetter-lane, and Barker-lane.
(b) North-street, and Tanner-row, including Simpson's-row, Church-lane, Little Church-lane.
(c) The Water-lanes, Castle-gate, Friar-gate, Spurrier-gate, Copper-gate.
(d) Mary-gate.

No. 4.—Foss-gate, Hun-gate, Garden-place, Stone-bow-lane, Green-lane, Palmer-lane, Wesley-place, Lowther-street, Hiram-place, Haver-lane, Dundas-street, Peasholm-green, St. Cuthbert, Barker-hill, Haymarket, St. Saviour.

City of York.

Report on its Sanatory State, by T. Laycock, M.D.

Appendix.

No. 7.—TABLE showing the Mortality at Different Ages, and Average Age at Death, in the several Parishes of the City of York, from 1780 to 1840. Calculated at Two Decennial and Eight Quinquennial Periods.

NAME OF PARISH.	Per Centage of Burials of Persons under 5 Years of Age.								Per Centage of Burials of Persons above 5 Years of Age.							
	1781 to 1791	1791 to 1801	1801 to 1806	1806 to 1811	1811 to 1816	1816 to 1821	1821 to 1826	1826 to 1831	1781 to 1791	1791 to 1801	1801 to 1806	1806 to 1811	1811 to 1816	1816 to 1821	1821 to 1826	1826 to 1831
St. Saviour	37·0	23·5	40·5	38·2	28·0	29·6	32·8	35·4	63·0	76·5	59·5	61·8	72·0	70·4	67·2	64·6
St. Cuthbert	41·8	35·2	34·1	36·1	30·4	35·8	33·6	40·2	58·2	64·8	65·9	63·9	69·6	64·2	66·4	59·8
St. Maurice	..	..	35·8	41·0	25·3	33·1	32·0	42·6	..	..	64·2	59·0	74·7	61·9	68·0	57·4
Trinity, Goodramgate	..	..	36·2	41·2	38·7	43·3	48·5	41·5	..	..	63·8	58·8	61·3	56·7	51·5	58·7
St. Michael le Belfrey	39·2	37·0	37·3	36·1	37·0	34·2	36·4	38·5	60·8	63·0	62·7	63·9	63·0	65·8	63·6	61·5
St. Olave*	25·3	24·3	14·6	14·7	17·8	27·8	28·6	23·3	74·7	75·7	85·4	85·3	82·2	72·2	71·4	76·7
St. Martin, Coney-street	50·0	49·1	11·6	24·4	30·0	26·0	27·5	22·5	50·0	50·9	88·4	75·6	70·0	74·0	72·0	77·5
Trinity, King's-court	..	..	..	..	..	23·5	48·5	52·9	..	..	..	..	..	76·5	51·5	47·1
St. Sampson	41·0	64·3	63·3	38·4	36·9	32·8	36·2	39·8	59·0	35·7	36·7	61·6	63·1	67·2	63·8	60·2
St. Helen	41·1	67·0	51·0	38·6	40·0	51·7	34·2	41·9	58·9	33·0	49·0	61·4	60·0	48·3	65·8	58·1
All Saints', Pavement	40·1	43·4	43·8	46·6	40·6	39·5	38·8	41·8	59·9	56·6	56·2	53·4	59·4	60·5	61·2	58·2
All Saints', North-street	47·1	44·0	49·2	49·0	48·2	46·3	54·9	38·3	52·9	56·0	50·8	51·0	51·8	53·7	45·1	61·7
St. John	49·3	55·9	47·7	48·5	50·7	51·0	45·2	45·1	50·7	44·1	52·3	51·5	49·3	49·0	54·8	54·9
St. Michael, Spurriergate	43·8	44·9	58·9	38·8	45·0	39·8	31·4	46·1	56·2	55·1	41·1	61·2	55·0	61·2	68·6	53·9
St. Mary, Castlegate	37·0	37·4	43·3	41·3	39·5	45·5	31·2	33·3	63·0	62·6	56·7	58·7	60·5	54·5	68·8	66·6
St. Dennis	42·5	37·6	37·1	52·8	45·8	36·6	38·5	48·5	57·5	62·9	62·9	47·2	54·2	63·4	61·5	51·5
St. Crux	36·6	32·6	33·0	34·4	34·0	35·6	47·3	44·2	63·4	67·4	62·0	65·6	66·0	64·4	52·7	55·8
St. Margaret	46·1	48·3	35·7	59·0	37·0	33·9	49·7	47·2	53·9	51·7	64·3	41,0	63·0	66·1	50·3	52·8
St. Lawrence	35·6	33·0	26·8	35·8	40·2	37·7	31·0	33·0	64·4	67·0	73·2	64·2	59·8	62·3	69·0	77·0
Bishophill, Junior	32·6	30·2	30·0	24·2	25·3	36·1	30·9	37·0	67·4	69·8	70·0	75·8	74·7	63·9	69·1	63·0
Bishophill, Senior	38·6	35·0	28 8	41·4	33·9	33·3	31·0	38·0	61·4	65·0	71·2	58·6	66·1	66·7	69·0	62·0
Trinity, Micklegate	30·6	29·04	36·6	34·4	20·8	30·5	28·8	13·4	69·4	71·96	63·4	65·6	79·2	69·5	71·2	86·6
St. Martin cum Gregory	29·5	33·6	21·8	22·0	44·1	27·1	26·8	22·0	70·5	66·4	78·2	78·0	55·9	72·9	63·2	78·0

NAME OF PARISH.	Per Centage of Burials of Persons above 70 Years of Age.								Average Age of Death of Persons Buried.							
	1781 to 1791	1791 to 1801	1801 to 1806	1806 to 1811	1811 to 1816	1816 to 1821	1821 to 1826	1826 to 1831	1781 to 1791	1791 to 1801	1801 to 1806	1806 to 1811	1811 to 1816	1816 to 1821	1821 to 1826	1826 to 1831
St. Saviour	19 0	12·0	14·0	14·0	18·5	15·6	13·7	18·6	30·3	33·4	26·7	30·7	34·0	35·4	30·2	28·2
St. Cuthbert	12·4	12 6	18·0	14·2	14·4	19·7	13·0	19·5	29·9	32·6	32·4	30·9	32·2	34·1	30·6	30·1
St. Maurice	..	..	14·4	13·0	14·0	22·6	26·6	20·9	..	..	23·7	29·2	34·4	35·0	37·5	30·9
Trinity, Goodramgate	..	..	16·0	12·7	17·8	12·5	6·4	17·0	..	..	20·3	29·1	29·0	27·4	23·8	30·7
St. Michael le Belfrey	12·25	18·0	12·6	13·0	22·2	15·7	14·4	11·4	29·1	30·9	29·2	30·8	32·2	31·9	29·6	29·0
St. Olave*	22·0	23·0	17·8	19·1	24·5	20·7	22·7	24·0	38·5	39·1	41·5	41·7	44·6	37·9	38·5	42·7
St. Martin, Coney-street	15·0	13·9	14·0	19·5	15·0	13·0	11·8	22·5	27·1	29·6	38·7	38·7	29·0	28·7	32·8	43·2
Trinity, King's-court	..	..	..	..	..	14·1	18·1	11·7	..	..	..	..	..	42·2	29·2	18·7
St. Sampson	12·0	13·1	13 8	16·4	18·5	13·3	12·7	12·2	27·4	25·7	24·9	32·2	29·0	33·2	31·2	29·5
St. Helen	8·6	16·5	9·4	16·0	13·3	13·8	10·5	3·2	24·1	30·9	25·8	32·9	24·2	23·4	21·9	18·7
All Saints', Pavement	10.9	14·5	9·6	12·6	12·0	10·4	14·8	9·3	30·1	26·9	26·8	24·3	31·1	29·4	29·2	26·2
All Saints', North-street	14·8	11·2	7·7	8·8	9·4	11·1	10·9	14·2	25·2	29·0	22·2	21·7	24·1	24·9	21·6	28·4
St. John	10·2	6·6	10·2	16·6	2·8	11·0	7·1	7·8	22·6	20·3	22·8	26·2	17·7	24·2	24·5	22·9
St. Michael, Spurriergate	11·0	11·3	3·5	17·9	12·2	13·9	14·2	11·5	26·0	26·1	19·7	34.4	14·9	28·8	37·2	22·1
St. Mary, Castlegate	15·8	7·7	13·4	14·0	20·4	11·2	12·7	12·1	30·3	27·6	32·1	27·1	31·9	26·1	33·6	31·3
St. Dennis	12·4	11·8	14·1	12·0	11·0	12·4	20·0	9·5	29·1	28·0	31·4	28·8	26·2	27·6	34·3	22·9
St. Crux	15·5	23·7	12·7	24·6	21·0	20·5	13·1	8·1	30·3	36·9	30·5	37·6	36·2	35·3	25·4	25·5
St. Margaret	9·7	13·3	8·0	12·6	11·7	15·6	11·8	13·4	..	27·1	29·8	24·1	30·7	27·2	23·5	26·6
St. Lawrence	16·1	15·3	8·6	15·5	17·0	17·9	9·6	15·4	30·7	25·6	29·7	32·0	30·3	31·5	31·8	28·5
Bishophill, Junior	14·3	14·8	17·5	15·5	24·0	10·3	20·6	15·7	33·2	31·4	35·4	36·9	39·9	26·9	34·1	30·3
Bishophill, Senior	14·9	19·4	18·7	15·9	16·4	24·0	16·6	15·5	31·5	35·4	37·6	29·3	32·9	35·4	31·3	29·5
Trinity, Micklegate	17·2	13·3	22·1	24·7	23·3	30·5	23·4	23·1	32·8	32·9	34·8	24·0	37·7	33·9	39·2	38·2
St. Martin cum Gregory	19·6	17·7	14·5	22·0	9·3	28·8	22·6	25·9	42·2	34·0	39·2	40·4	28·7	41·5	47·9	42·4

* This parish contains the County Asylum, City Workhouse, and one or two hospitals for aged persons.

N.B.—The grave-yards of some of these parishes being small and insufficient (*vide* App. No. 13), the numbers interred in them do not correspond with the numbers dying in the parish; and as there was no other parochial place of interment previously to 1836, except the Friends' burying-ground, other grave-yards must have received the dead from the parishes in question.

No. 8.—Table showing the Average Age at Death, and Per Centages at Three Ages of all the Persons Buried in each Parish of the City of York (whose Ages are entered in the Registers) between 1770 and 1831.

	Number whose Ages are Registered.	Average Age at Death.	Per Cent. Dying aged under 5 Years.	Per Cent. Dying aged above 5 Years.	Per Cent. Dying aged above 70 Years.	Years above or below the Average at Death in the whole City.
For the whole of the city . . .	26,045	30·80	36·44	63·56	15·00	..
a St. Olave	3,233	40·42	22·05	77·95	21·72	+9·62
St. Martin cum Gregory . . .	623	34·18	28·36	71·64	20·05	+3·38
Holy Trinity, Micklegate . . .	1,280	33·86	27·89	72·11	22·20	+3·06
St. Martin, Coney-street . . .	400	33·65	30·14	69·86	15·59	+2·85
Mary Bishophill, Junior . . .	946	33·20	30·79	69·21	16·59	+2·40
St. Crux	711	32·96	37·84	62·16	17·40	+2·16
Mary Bishophill, Senior . . .	1,271	32·67	35·00	65·00	17·67	+1·87
St. Cuthbert	1,405	31·61	35·90	64·10	15·41	+0·81
b St. Maurice	652	30·18	35·90	64·10	18·58	−0·62
St. Saviour	1,229	31·37	33·12	66·88	15·68	+0·57
Trinity, King's Court	101	30·14	41·63	58·37	23·63	−0·66
St. Lawrence.	987	29·59	34·14	65·86	14·42	−1·21
St. Michael-le-Belfrey	1,828	29·41	36·96	63·04	14·94	−1·39
St. Mary, Castlegate.	1,614	29·28	38·56	61·44	13·41	−1·52
St. Sampson	1,883	28·41	44·10	55·90	14·00	−2·39
St. Dennis	1,294	28·30	42·36	57·64	12·90	−2·50
All Saints, Pavement	1,197	27·91	41·82	58·18	11·76	−2·89
Trinity, Goodramgate	799	26·70	41·53	58·47	12·73	−4·10
St. Margaret	1,250	26·70	44·61	55·39	12·01	−4·10
St. Helen.	539	25·44	45·69	54·31	11·41	−4·36
St. Michael, Spurriergate . . .	909	25·83	43·59	56·41	11·94	−4·97
All Saints, North-street	889	25·30	47·12	52·88	11·01	−5·50
St. John	1,005	22·74	49·17	50·83	9·04	−8·06

*** The names are given as the average age is above or below the mean age of the whole city.
a. With the deaths from the County Asylum, the city workhouse, and a hospital for decayed gentlewomen.
b. The deaths in the County Hospital, situate in this parish, are not included.

No. 9.

Names of the District Visitors in connection with the York Sanatory Committee.

Rev. J. Sabben, Rector of St. Dennis and St. George.
Rev. C. Rose, Curate of St. Cuthbert.
Rev. S. C. Baker, Curate of St. Saviour.
Rev. J. Heslop, Jun.
William Reed, Esq., Surgeon.
O. A. Moore, Esq., Surgeon.
R. Thomas, Esq., Surgeon.
T. Crosby, Esq., Surgeon.
S. Tuke, Esq.; G. Lawton, Jun., Esq.; D. Priestman, Esq.; C. Wilkinson, Esq.; Mr. E. S. Rickman, and Dr. Laycock.

The districts and parishes referred to in this Appendix contain three-tenths of the population of the City of York, and may be considered as correctly representing the condition of the other parts of the city not visited, inhabited by the labouring class.

These districts, with the exception of St. Dennis, were visited at the end of the last and beginning of the present year by the gentlemen named above, who readily afforded their services: St. Dennis was visited by the Rev. James Sabben and Dr. Laycock, in March, 1844.

Remarks of District Visitors with reference to Privies, Drains, and Ventilation, &c.

Tanner-row.	
Queen-street	Illness attributable to dampness, Nos. 13, 15, 27.
	One privy to nine families, No. 22 to 30.
	Rheumatism a good deal complained of in this neighbourhood.
Derbyshire's-yard . . .	During a flood the water is in the lower end of this yard; and the damp appears generally to affect health.
North-street	No drainage; this complained of throughout.
	Bad smells from manure heaps about No. 32.
Black Boy-passage . . .	No drains; complaints of neglected state of the yard.
Pinder's-court	No drain; soil against back wall.
Hicklin's-court	Drainage indifferent; bad smells in summer.
Cross Key's-yard . . .	No drain; slaughter-house occasionally smells.
Peart's-court . . .	No drain.

SKELDERGATE . . .	Complaints as to drainage. Great nuisance from tallow-chandlers' Nos. 5 and 6. Complain of "ket" kept for greyhounds, No. 8. Drains complained of, No. 11; but good, No. 16 to 31. No drain No. 37; great complaint from hence. This (No. 37) being at the lowest side of the street, the water, &c. is constantly running towards it, rendering it damp and unpleasant. The houses opposite have no yards, and all the refuse is thrown into the street. Privy and other nuisances are only separated from the kitchen by a door and thin partition.
Albion-street	No efficient drainage; and the inhabitants consider it unhealthy in consequence; much complained of.
Beedham's-court . . .	Bad drainage; wet and dirt abundant. Privy common to many, and in a sad filthy state. The condition of this court deplorably bad throughout. Several of the lower rooms damp.
Smith's-buildings . . .	No sufficient drainage; privy common to many families.
Fetter-lane	Good drains, except No. 7, which has walls bad and damp.
Scrivener's-court . . .	Complaint as to drainage; at times, lower portion of house inundated.
Hardman's-buildings . .	Ventilation bad. No. 15, Skeldergate; cellar complained of by the whole inhabitants of buildings (No. of persons, 38.) The drain from the adjoining court appears to run into this cellar, and to have no proper outlet from it.
MARYGATE	No. 6 to 21 have only one privy in common, and that in a filthy state. No. 1 to 21 no drain; 23 none. No. 28 to 40 only one privy. Houses from No. 1 to 40 have no back door, and, with few exceptions, no back windows. They are built close up to the boundary-wall of St. Mary's Abbey grounds, and are consequently damp and imperfectly ventilated. No. 25 and 26 no drain; 50, 57, and 58 no drain.
Peirson's-buildings . . .	No drain.
Court at No. 56 . . .	At the end of this court eight pigsties; no drain.
Jackson's-court . . .	Three houses badly drained; three no drains.
CASTLEGATE.	
Friargate, or Far Water-lane.	Nos. 18, 19, 20, and 21 damp floors, subject to be flooded. Rheumatism attributed by shoemaker to drain passing under the room in which he lives. The inhabitants of this district are subjected to much inconvenience and disadvantage from, 1. Insufficient drainage. 2. Want of privies. 3. Having water to fetch from the river. 4. The inadequate breathing space in many of the rooms; and 5. The narrow alleys or close yards in which the houses are placed. 1. *Drainage.* Although the street was, several years ago, well drained, very few of the houses, and none of the alleys, have openings into the drains; the grates in street furnishing a place for throwing down offensive matter. 2. *Privies.* Many have no provision at all, and have to steal the use of their neighbour's convenience, or to use the open street, which by night is often done. The common privies, in many cases, dirty and offensive, and so close to, and open to dwellings, as to expose them to the most offensive effluvia, especially in summer. 3. *Supply of water.* Cleanliness is very much discouraged by the want of a convenient supply of water. A public provision would be a great boon. 4. *Size of rooms.* The rooms are generally small, being about 12 ft. by 12 ft., and from 7 ft. to 8 ft. high; many below 7 ft. In some cases, families have but one of these rooms for all purposes. 5. *Crowding of houses together.* Some restriction seems requisite both as regards this point, and the placing houses in situations where they are likely to be flooded.
Cross-alley	From 2 ft. 6 in. to 4 ft. wide, and about 80 feet in length; no drain; an open channel runs along it, receiving much offensive matter, particularly the oozings from the offices on the east side, as well as from the common privy, which is a filthy place. There is an open receptacle for all the refuse of more than 30 inhabitants. It is singular that no illness is reported for last year, but the oldest inhabitant and owner of several houses, and who thought the place pretty healthy, said, "many bairns dies" of scarlet and typhus fevers.
A court	Has an open soil place, and offensive matters in it; no drain.
Flag-yard	No drain; common privy; one family had six children born in six years; and has buried four.
Friar's-alley	No drain; common privy; complain with others (Flag-yard, &c.) of the drains from the neighbouring pigsties, especially when they are being cleared out; proprietor expresses his full intention to remedy the evil.
Ickeringall's-yard . . .	No drain; two complain of smell from pigsties; one, no complaint.
Middle Water-lane . . .	In the five beds in one room of lodging-house, (No. 7) men and women are lodged *indiscriminately*. Top drainage; bad smells at five dwellings; Nos. 19 and 20 bad occasionally; 12 complains of adjoining privy, and No. 21 of pigsty.
Brown's-yard	No drain; one common privy; two complain of bad smells.
Richardson's-buildings. .	All (10 families) have but one privy; no drain.
Clapham's-yard. . . .	All complain of stench from the privy.

Cornwall-place . . . . No drain, but top drainage; privy adjoining the houses is open for all the lane; feculent matter allowed to accumulate, and altogether a great nuisance; all occupied as lodging-houses. The scum of the country here come and sleep, and there is no discrimination of sexes.

First Water-lane . . . Pigsty in back yard, at No. 15. There are two lodging-houses, a fair sample of the class; the rooms generally low, confined, and ill adapted for human occupation. There are no nuisances complained of. It appears to the visitor that the greatest improvements (under existing circumstances) would be better drainage, and some improved mode of ventilation.

Beddern . . . . . Drain near to the surface; smells occasionally very bad. No. 5, drainage terribly bad. No. 8, cellar frequently three inches deep in water. Effluvia from bad drainage, No. 15. Drainage fearfully bad, No. 16. No privy fit for use to No. 20, which is sublet to 10 families, consisting of 29 persons.

Parish of St. Cuthbert.

St. John's-place . . . No drainage, except an open channel in the middle. The privies have no drains, and in wet weather have to be emptied by buckets into the open channel; the effluvia being bad and noxious. The ill state of health of family at No. 1, attributed by medical man to existing nuisances.

Layerthorpe. . . . . The inhabitants on both sides of the bridge complain of very bad smells which emanate from the manure yards placed close to the bridge, which they consider a great nuisance.

Scruton's-yard . . . . Drainage very bad; an open channel filled with stagnant water. Nauseous smells from pigsty and boiling-house for pigs' meat.

Aldwark. . . . . Drainage bad. No. 1, Monkgate, complain of the smell from the pigsty in the Red Lion-yard, behind Nos. 4, 5, and 6.
Nos. 29 and 48, drainage bad; and also of Ickeringall's-yard. Open drain runs through the yard. Three privies for about 80 people.

Barnes'-passage . . . One privy for eight families; drainage bad; pigsty near door of No. 4.

Brunswick-place . . . No. 2, complain of smoke at adjoining paper-mill, as unhealthy in its effects.

Parish of St. Saviour.

Hungate . . . . . Channel No. 23 frequently stopped; causes a nuisance.
No. 24, smell from neighbour's boiling pig meat and fish.
No. 45 and 46, complaint of slaughter-house. All houses from 41 have no thorough draught.
No. 5, &c., damp from churchyard, being lower. No. 3½ complain of privy in house; slugs in cupboard; damp from churchyard. Stables behind No. 3 also strike damp.

Drummond's-court . . . All damp; one from soil-hole on other side; open space in the court, in which, with small gardens to each house, are the four privies, sinks, &c.

Foss-lane . . . . . Smells from the gas-works and privies; Foss occasionally overflows, drain complained of as dangerous; stables, and privy and soil near the window at tenements 1 and 3; privy in front of Nos. 8 and 9.
Yard of tenement No. 3 very dirty; cow-houses.

Smith's-buildings . . . Much complaint of smell from drain and gas-works, &c.; effluvia in yard; several houses cold and damp; all use two common privies in the back yard; open soil-hole, and general appearance of both courts very dirty.

Arthur's-court . . . . Grates not attended to; stopped up.

Bradley's-buildings . . . This court has blacksmith's shops, &c., in it, and wants ventilation.

Dale's-yard . . . . . Manure heap not been emptied to bottom for two years; complained of.

Palmer's-lane . . . . General complaints of ill-health; attributed to damp and fogs, &c., from the river Foss.

Passage behind 25 ditto . Complaints of damp from Foss, and consequent bad health.

Dundas-street . . . . Gas-works occasionally unpleasant; No. 11½ complained of privy under bed-room, which often stands two feet in water.

Dundas-place . . . . Complaint of smoke from low chimnies of paper-stainer.

Garden-place . . . . Privies next to door of No. 4; imperfect drainage; and butcher's yard complained of as nauseous; the fluid running into the street; stables also occasionally very offensive; No. 1 drain frequently stopped up, and "floods out" the inhabitants.

Black Horse-passage . . A stagnant pool in privy exceedingly annoying, and much complained of by all around; open channel or surface drain, into which not only slops, but fæces are thrown, occasioning most abominable smells.

Lowther-street . . . . Yard opposite No. 22, occasionally offensive.

Bellerby's-building's . . No. 11 very full of bugs; privies near the door.

Rusby-place . . . . Manure at No. 5, and pigs at No. 4, occasionally offensive.
Gas very generally complained of in this neighbourhood.
Nos. 4, 5, and 6, very close and confined, though new tenements.

Carmelite-street . . . . Much complaint of slaughter-house behind Nos. 7, 8, and 9.

Back Hiram-place . . . Manure-yard very offensive.

Hirom-place. . . . . Gas complained of as occasionally offensive at No. 13. No. 15 and 16 close and dirty.

Parish of St. Dennis.

Whitehead's-court . . . Drain just laid on to river Foss; latter, however, often offensive from dead animals, &c.

Woodcock's-yard	Complaints of privy and open soil hole opposite some of the tenements.
Deighton's-yard	No drain; mere open channel; dunghill in next yard stinking.
Black Bull-lane.	No drain; open gutter; a row of houses adjoining skin-yard; and grievous stench from slaughter-house and knacker's yard; much complaint both of this and pigstyes.
Fawcett's-yard	No drain; mere open channel; one privy common to nine families; open soil-hole much complained of; yard being very confined.
Boocock's-yard	No drain; open gutter; one privy to four tenements; open soil-hole; imperfectly paved.
Barleycorn-yard.	No drain: open channel; two privies common to 12 or 20 families. The lower part of this yard to the Foss tolerably open, but near the street confined and crowded; pigstyes, privies, and open ash-holes stinking.
Wood's-yard.	Ash-hole close under the stairs.
Rectory-buildings	Privies and ash-holes in front of the houses; three yards being the breadth of the court; air very impure.
Parish of St. George.	
Longclose-lane	Longclose-lane undrained and unpaved; no drain at back; complaints of bad smell. No. 3, though new, swarms with bugs; and filth is thrown in front, &c. The new houses at the end of Longclose-lane, are built back to back; in front is the street full of mud, and covered with ashes and refuse from the dwellings; road almost impassible.
Yard No. 2	Water stands in a pool; privy in front of door.
Houses towards walls	On a uniform plan, back towards ramparts, with small gardens in front, and privies and pigsties, &c., behind; no drain.
Hope-street	Houses uniform; no drain; each have a privy; houses damp from bad drainage.
Ditto, Back-yard, No. 1	Two privies for five houses.
Hope-street	No. 7 crowded, and in an unhealthy state; pigsties in almost every yard; dung-heap, &c., in back yard, No. 17. No. 37, this house in a filthy state; and an abominable stench from the excrements of cats, &c., the occupant seems rather eccentric. No. 58 complains of his neighbours emptying chamber-pots, offal, &c., in the back-yard. The soil "hole" has a spring in it. Back-yard No. 28; two privies for eight houses. Back-court, 46, in a filthy state; the privies running over and allowed to accumulate, and altogether it is very confined; there is also a pig-sty, henroost, and cowhouse, closely attached to the house. Yard 51, badly drained, and filth allowed to accumulate. Court 57; two open privies; a great nuisance. Back court (67), Hope-street; landlord resides on the premises; cleans out the yard and privies, and discharged a tenant for keeping pigs.
Ditto, No. 3 to 16	The water-drains from Longclose-lane into the yard at the back of these premises and floods it, causing a bad smell, &c.
Parish of St. Margaret, with St. Peter-le-Willows.	
Walmgate	Steam and smell from main and communicating drain on the west side of street (Walmgate) much complained of, especially from No. 143 to 150. In sixteen cases of small-pox, nine had been vaccinated and seven not.
Waterhouse's-yard	Lower windows do not admit of being opened; damp; no drain; only one privy.
Dalton's-yard	Pigsties and stables at top, but tolerably clean; no drain.
Britannia-place	Dirty; no drain; bad smells; four privies opposite the houses; soil thrown before them.
Huby's-yard	Stables, but clean; no drain.
Walton's-yard	No drain.
Agar's-yard	No drain; man having diarrhœa frequently, attributes it to a privy opposite, and very near his door.
Marshall's-yard	No drain; tolerably clean.
Burdekin's-yard	Ditto.
Butcher-yard	Very filthy; two privies opposite the houses; no drain; five lodging houses.
Glaney's-yard	Dirty; no drain; bad smells.
Blyth's-yard	Drainage insufficient; pigsty; an open privy complained of; two manure heaps; unpaved; colds, dyspepsia, diarrhœa common.
Gurnett's-yard	Two privies and manure heap beyond the houses.
Navigation-road	Drained; but a manure heap and open privy complained of.
Speculation-street	Unpaved, and the water stands; manure heap and slaughter-house causing bad smells complained of; no drain.
Rosemary-place, Yard No. 1.	Two or three manure heaps opposite the house.
Caroline-place	Unpaved; stables; two privies, and two or three manure heaps.
Browne's-yard	Manure heap; unpaved; no drain.

The following streets and yards, &c., in the district inspected, were found to have no proper drains:—

North-street	Black Boy-passage. Pinder's-court.

	Cross Keys-yard.
	Peart's-court.
Skeldergate	Part of this street about No. 37, appears to have no drain.
	Albion-street.
	Beedham's-court.
Marygate	No. 1 to 21 no drain, and No. 23.
	Peirson's-buildings.
	Court at No. 56.
	Jackson's-court, part no drain.
Castlegate	Cross-alley, and a court near.
	Flag-yard.
	Friar's-alley.
	Ickeringall's-yard.
	Middle Water-lane.
	Brown's-yard.
	Richardson's-buildings.
	Cornwall-place.
Beddern	Drainage exceedingly imperfect.
St. Cuthbert	St. John's-place.
	Scruton's-yard.
	Ickeringall's-yard.
	Black Horse-passage.
St. Dennis	Deighton's-yard.
	Black Bull-lane.
	Fawcett's-yard.
	Boocock's-yard.
	Barleycorn-yard.
St. George	Longclose-lane, and some of courts at back, no drain.
	Hope-street; parts defective in drainage.
St. Margaret	Britannia-place, no drain.
	Huby's-yard, ,,
	Agar's-yard, ,,
	Marshall's-yard, ,,
	Burdekin's-yard, ,,
	Clancey's-yard, ,,
	Speculation-street. ,,
	Browne's-yard, ,,

Remarks of Visitors with reference to supply of *Water*.

North-street	Some few houses have to fetch their water from the river.
Tanner-row	Wellington-row, and some other portions of this district, fetch also from the river.
Skeldergate	Though pretty generally laid on from water-works, or pumps, many families fetch from river.
Castlegate	Cleanliness much discouraged for want of more convenient supply of water. Peckett's-yard, Flag-yard, Friar's-alley, and other parts of this district, without supply of water, except from river.
Marygate	Many houses in which the water is not laid on.
Beddern	No. 12 and 13 complain of want of water.
St. Cuthbert	Complain in Ickeringall's-yard, of there being only one small tap to 23 families in a cold open passage; that the water contains a considerable quantity of mud, and have no filter.
St. Saviour	With but rare exceptions, pretty well supplied.
St. Dennis	Generally tolerably well supplied; few complaints.
St. George	Supply of water in Longclose-lane, and Hope-street, generally complained of as scanty. Some mornings it runs 10 or 15 minutes only and on Sundays not at all.
St. Margaret	Complaints that the water is turned off too soon, owing it seems to some begging, or taking it, who do not pay for it.
	Bell's-yard, no water except from spout; *Huby's-yard*, no tap or pumps
	Yard No. 2, Rosemary-place, no tap nor pump.

No. 10.—A List of the Drains made in the City of York by the Commissioners empowered by Act of Parliament, termed the York Improvement Act, showing the size, length, depth from surface, date, and cost of each.

[The drains are all of the Barrel-form, 5 inches thick, and have from ½ inch to ½ inch fall per yard.]

Situation of Drain.	Cost. £.	s.	d.	Length in Yards.	Size or Diameter in Inches.	Depth from Surface in feet.	Year when Constructed.
Little Stonegate and Swinegate	69	0	0	218	..	6½	1825
Jubbergate, from the River Ouse at Waterloo-buildings to the end of Goodramgate, in King's-square	193	18	6	375	30 by 18	10	1832
Goodramgate, part of, to King's-square	39	0	0	160	14 diam.	6	1833
Petergate, part of, to King's-square	24	0	0	125	14	8½	,,
Feasegate, part of, to Jubbergate	12	0	0	51	14	8½	,,
Feasegate, part of, to St. Sampson's-square	6	10	0	36	14	6	,,
Shambles, part of, to Jubbergate	9	12	0	65	14	9	,,
Little Shambles to Jubbergate	15	0	0	60	12	8	,,
Shambles, part of, into Pavement	15	10	0	71	14	9	,,
Paver-lane	25	0	0	56	14	7	,,
Walmgate	185	0	0	550	18	9	1834
Micklegate-bar within	10	0	0	118	18	6	,,
North-street, a part of	18	0	0	60	21	9	,,
Gillygate and Lord Mayor's-walk to Moat Drain	96	0	0	438	18	5½	,,
Hungate	46	15	0	280	21	6½	,,
Aldwark	109	0	0	328	21	9	,,
St. Andrew-gate	73	0	0	232	18	9	,,
St. Saviour's-place and St. Saviour's-gate	63	0	0	326	18	9½	,,
Spen-lane	15	0	0	88	18	10	,,
Coney-street, from St. Martin's Church to Common-hall lane	28	0	0	85	21	7½	,,
Petergate, from Stonegate to Bootham-bar	72	0	0	238	18	8	,,
Navigation-road	35	0	0	100	18	5	,,
Micklegate to Trinity Priory	173	0	0	362	21	10	1835–37
Bishop-hill, Junior, through Victoria-bar	25	0	0	305	18	10	,,
Friargate	52	0	0	172	18	9½	,,
Castlegate	41	0	0	83	18	8½	,,
Ousegate	25	0	0	78	18 by 21	9	,,
Goodramgate, through Monk-bar	17	0	0	170	18 diam.	5	,,
Little Blake-street	35	0	0	130	18	8½	,,
Queen-street without Micklegate-bar	32	0	0	125	14	8	1841
Coppergate	35	0	0	151	18	10½	,,
Toft-green	15	0	0	30	14	5	,,
Skeldergate, part of	7	10	0	50	12	5½	1843
Coney-street, part of, to Waterloo-buildings	16	0	0	45	18	7	1840
George-street	17	10	0	65	21 by 18	10½	1844
Bootham	113	0	0	320	21 by 18	8½	,,
Total	1764	15	0	6146			

No. 11.—Measurement of the length of the Principal Streets, Lanes, &c. in the City of York, which are Paved; anno 1825.

		Yards.
	From Holgate-lane corner to Micklegate-bar	266
	Through Micklegate-bar and Barbican	30½
Drained	Micklegate-bar to North-street and Skeldergate-ends	450
	North-street to the steps leading to the Queen's-staith	51¾
Drained in part	*North-street*, from corner of Bridge-street to Tanner-row	215
Drained in part	*Toft-green and Tanner-row*, leading from Micklegate-bar to North-street.	530
	Trinity-lane, from Micklegate to Lane-ends, on Bishop-hill	185
	St. Martin's-lane, from Micklegate to Lane-ends, on Bishop-hill	132
Drained to Victoria-bar.	*Bishop-hill*, from St. Martin and Trinity-lanes to Gaol-lane	217½
	The Gaol-lane and in front of the House of Correction to the CityWalls next Skeldergate.	152
Drained in part	*Fetter-lane*, from Lane-ends on Bishop-hill to Skeldergate.	138¼
Drained in part	*Skeldergate*, from Micklegate to Rosemary-lane.	401¼
Drained	*Low Ousegate*, from Bridge-end to end of Spurrier-gate, &c.	77
	Spurrier-gate, from Low Ousegate to Coney-street	80½
Drained—part drained.	*Coney-street*, from Spurrier-gate to centre of Common-hall-lane	247½
	Lendal, from Coney-street to Finkle-street-corner	149½
Drained	*Road to Waterworks*, from Lendal-corner to Ferry-steps	88
Drained	*Finkle-street*, from Lendal-corner to Etridge's Hotel corner	109¾

No. 11, Measurement, &c.—*continued.*

City of York.

Report on its Sanatory State, by T. Laycock, M.D.

Appendix.

		Yards.
Drained in part	From Etridge's corner along *Little Blake-street* to Petergate	130¼
Drained	*High Petergate*, from Stonegate to Bootham-bar	238
,,	*Low Petergate*, from Stonegate to the centre of Goodramgate	195¾
	Collier-gate, from Goodramgate to the Pavement	162¼
	Pavement, from Fossgate to the Lamp-post in centre of ditto	107¾
,,	*High Ousegate*, from Gas-lamp in Pavement to Nessgate-corner	151¾
	St. Helen's-square, from Common-hall-lane to Stonegate	54¼
	Blake-street, from St. Helen's-square to Mr. Etridge's corner	124¼
	Stonegate, from St. Helen's-square to Minster-gates	189¼
Drained in part —drained.	*Goodramgate*, from Petergate corner to Monk-bar	330
	Monkgate, from Monk-bar to the end of the Pavement	248
	Barker-hill, from Monkgate to the house formerly occupied by Rev. John Graham	150¾
Drained	*Lord Mayor's-walk*, from Monkgate to Gillygate corner (Macadamized)	440
,,	*Gillygate*, from Lord Mayor's-walk to Bootham	318¼
	Marygate, from Bootham to the river Ouse	431
,,	*Castlegate*, from Low Ousegate to Tower-street	223¼
,,	Friargate, length of	172
	Second Water-lane ditto	154
	First Water-lane ditto	121¼
,,	*Coppergate*, from Castlegate to the Lamp in centre of Pavement	147¼
	Fossgate, from centre of Bridge to Pavement corner	167
,,	*Walmgate*, from centre of Foss-bridge to Walmgate-bar	594
	Walmgate-bar and Barbican	27¼
	From Bar to end of Pavement	13
,,	*Hungate*, from St. Saviour-gate to the river Foss	280
,,	*Haver-lane*, from Hungate to Peasholme-green	73¾
,,	*Aldwark*, from Peasholme-green to Goodramgate	291½
	Ogleforth and Chapter-house-street, from Goodramgate to Minster-yard	198
	College-street, from Goodramgate to Minster-yard	97¼
	Beddern, from Goodramgate to end	71
,,	St. Andrew-gate, from Colliergate to Aldwark	232
	Peasholme, from centre of Woolweigh to Layerthorpe-postern	170¾
	Peasholme, from centre of Woolweigh to St. Saviour-gate	77
,,	*St. Saviour-gate*, from Colliergate to Spen-lane	218
	Davygate, from St. Helen's-square to Thursday-market	184¾
	New-street, from Coney-street to Davygate	98¼
,,	*Jubbergate*, from Coney-street to Silver-street	193½
,,	*Newgate-street*, from Jubbergate to Swinegate	37¼
Drained in part	*The Shambles*, from Pavement to Swinegate-end	148
,,	Little Shambles, from Jubbergate into Great Shambles	66
Drained	Little Stonegate, from Stonegate	89¼
	Minster-yard, from High-gates to the Low-gates, south entrance	139¼
	Minster-yard, from South-gates to College-street	133½
	Minster-yard, from College-street to end of New Deanery	130
Drained in part	*Feasgate*, from Jubbergate to the Gas-lamp in the Thursday-market (removed)	115¼
Drained	*Spen-lane*, from St. Saviour-gate to the School-yard	88
Drained in part	Navigation road, from Walmgate, down Caroline-place, to the Foss	286
Drained	Queen-street, without Micklegate-bar	
,,	Bootham-bar without, to the end of Pavement (Asylum-gates).	324
	Total yards paved	12,155¼

J. B. Atkinson.

No. 12.—A List of the School-rooms in York for the Children of the Labouring Classes, 1844; communicated to the Commission by Mr. J. Rowntree.

Micklegate Ward.

1. A National Boy's School, immediately without Micklegate Bar, for 150 children. The room is recently erected; it is well lighted and ventilated; there is a small play-ground attached, with suitable offices.
2. The Nunnery Girls' School for 50 children; the room at present rebuilding.
3. British Girls' School, Gaol-lane, for 160 pupils; a recent erection; well lighted, warmed, and ventilated; has suitable offices; play-ground small.
4. Wesleyan Albion-street School for 140 pupils. The school-room contiguous to the chapel; not lofty; well lighted, &c.; suitable offices; rather small play-ground.
5. Church of England Infant and Sunday Schools, situated at the south end of Skeldergate; new erections, and well adapted for 300 children; play-ground and offices.
6. Dodsworth's Bishophill Boy's School for 20 pupils. The room small; no play-ground.

Bootham Ward.

1. The Manor National School for 300 boys. Buildings old but spacious, with offices and small play-ground.
2. School for 60 blind children; the premises large, and suitably fitted up.

ST. PETER'S LIBERTY.

Archbishop Holdgate's Free Grammar School; 30 pupils; a small yard; room pretty well lighted and ventilated.

MONK WARD.

1. Blue-Coat School; 64 boys boarded and taught gratuitously; buildings large; well ventilated, &c.
2. Rev. J. Willey's Bilton-street School, for 220 boys. A recent erection, and well adapted; play-ground small.
3. Girls' National School and Infant schools; the school-rooms are in the Merchant Tailor's Hall. The large room in which the girls are taught is airy and cheerful, and would accommodate 200 pupils; the smaller rooms about 100 infants. There is a small play-ground and suitable offices.
4. The Diocesan Training School, Monk-gate. Premises well drained; lighted and ventilated; with play-ground and garden adapted for 80 pupils.
5. Roman Catholic Boys' School in the Red-lion-yard, near Monkbar. An upper room; could accomodate 100 children; a small yard with offices.
6. Salem Chapel Girls' School, under the chapel, for 200 pupils; play-ground and offices.
7. St. Andrewgate Infant School, for 200 infants; room large and well lighted, with play-ground and offices.
8. Wesley-place Schools, for 200 infants and 150 girls. Rooms of modern erection and pretty well adapted; play-ground very small; well lighted and warmed, with suitable offices.
9. Grey-Coat Girls' School, Monkgate; 44 children taught and boarded gratuitously; suitable school-room, play-ground, and offices.
10. Spinning School, St. Andrew-gate, 46 girls.
11. The Groves Girls' School, situate in Penley-grove-street; 90 girls; rooms recently erected; with offices and small play-ground.
12. Salem Chapel Boys School, Saviour-gate. Room now erecting for 200 children.

WALMGATE WARD.

1. Houghton's School, end of Collier-gate; 40 boys; room well lighted, but rather small; has suitable offices, but no play-ground.
2. Girls' School in the Merchant's Hall, for 30 children; small room and poorly ventilated; no play-ground.
3. Wilson's Charity School, Foss-bridge; 40 boys; small yard; offices.
4. Infant School, Navigation-road, Walmgate; 120 pupils; room well lighted; tolerably well ventilated; small play-ground and poorly drained.
5. National Boys' and Girls' School; 150 each; new erections and well adapted; suitable offices and play-ground.
6. British Boys' School, Hope-street; 220 boys; a modern erection, with suitable offices and large play-ground.
7. Dodsworth's School, without Walmgate Bar; 20 pupils; no play-ground.
8. Dodsworth's School, Castlegate, near to the bottom of Friargate; about 30 children; the room low; the situation poor and badly drained; small play-ground.
9. S. Tuke's Girls' School, Lawrence-street; 80 children; well lighted and ventilated; small yard and offices.

No. 13.—The Grave-yards in York.

In 1832 the York Board of Health (constituted when the cholera broke out) forwarded a report and memorial to the Privy Council on the state of the grave-yards in York. "The Memorial," to quote the words of the York Herald, "called the attention of their Lordships to the very crowded state of all of them, and to the great difficulties which the Board has to contend with in protecting the living from the infection of the remains of those who have died of the Spasmodic Cholera. It represented that in some of the church-yards it is difficult to find a place of sepulture at all, and that in others, the graves cannot be sunk to a greater depth than three or four feet. That those crowded burial-grounds are in the most populous parts of the city, and several of them are closely surrounded by thickly-peopled dwellings of the poorer and middling classes. That in one of those church-yards, three burials had taken place in the course of a few days; that one of the infected bodies had been forcibly taken into the church, contrary to the recommendation of the Board, thereby exciting fears and exposing the inhabitants to unnecessary dangers. That the Cholera Hospital has a place for interment in its immediate vicinity, and that a general burial-ground had been prepared in another place for the cholera victims. That, however, prejudices against interment in those places, &c. &c., are still very great and prevalent; and therefore, that the further instructions and assistance of the Privy Council are requisite and respectfully solicited."

The Report, which is subjoined, although made nearly twelve years ago, applies to the present (1844) state of most of them. Some are probably worse now than then, as for example, St. John's, Micklegate. The areas of the grave-yards of St. George, St. Sampson, and St. Martin cum Gregory are omitted, and are given in this list from the returns of the Ordnance Survey.

Parishes.	Extent of Burial Grounds, and whether sufficient.	How often, if more than once buried over.	At what depth Burials can be made, and whether without disturbing recent Interments.	About how many the Monthly Average of Burials.
ALL SAINTS, NORTH-STREET.	Two burial grounds, one 20 yards long, 7 wide; the other about twice the size; surrounded by buildings, and highly improper that persons dying of the disorder (Cholera) should be buried there.	Half filled; more than once buried over.	Graves can be made six feet deep.	About two.
ALL SAINTS, PAVEMENT.	Considerably too small for the wants of the parish.	Buried over more than once, and from this circumstance	Exceedingly difficult to obtain graves at any depth.	One and 29-36ths.
CHRIST PARISH .	220 superficial yards, not represented to be too small for the number of the inhabitants.	Has been buried over more than once, though not in regular order.	Graves usually dug five feet deep, and not lower, without disturbing former interments.	The annual average number of burials does not exceed 12.
ST. CRUX	25 yards by 13, amply sufficient under ordinary circumstances.	No part of it has recently if ever, been buried over more than once.	Nothing to hinder the graves being made any reasonable depth.	One and 3-4ths.
ST. CUTHBERT . .	Considered too small, calculated to contain about 2000 square yards.	Has been buried over twice during the last 17 years.	The greatest depth for burying is six feet, but in a considerable part only four feet, on account of water.	The average of burials is about five per month.
ST. DENNIS . . .	Of very small extent, and has long been insufficient for the parish.	Has been repeatedly buried over and extremely difficult to find a spot for interment without disturbing the coffins of such as have been buried within 4 or 5 years.	Graves usually five feet deep.	The monthly average of burials is four or five.
ST. LAWRENCE . .	The extent of the church-yard is about 48 yards by 28 yards, and is sufficient for the burials belonging to the parish, but is somewhat crowded by additional ones from other parishes.	No part of it has been recently buried over more than once.	Graves may here be made any depth that may be reasonably desired.	The monthly average of burials in this church-yard is somewhat short of two.
ST. MARGARET . .	Extent 60 yards by 45 yards, and is quite sufficient as a burial-place for this parish.	It has not recently, in any part of it, been buried over more than once.	Not convenient to make graves much deeper than ordinary, on account of water springing up in them.	The average number of burials per month in this parish, for some years past, has been three. This year, 1831, below the average.
ST. MARY, BISHOP-HILL, Jun.	Church-yard much too small	. . . .	Scarcely ever a funeral without disturbing other remains, and breaking coffins.	. . .
ST. MARY, CASTLE-GATE.	Considered large enough should the Cholera arrive.	. . . .	Can bury six or seven feet in depth.	Average number of burials is from two to three.
ST. MAURICE . .	Sufficient now for the parish, but so many funerals are brought from the County Hospital, of persons not belonging to the parish, that it is doubtful whether it will be sufficient eventually.	Half the burial-ground being ancient, it is impossible to say how often it has been buried over; the new part has not been once buried over.	In the old part the graves cannot be made deep, on account of previous interments; in the new part, they may be ordinarily made to any depth, former interments probably never disturbed.	The average of burials is three per month.

No. 13.—Grave Yards in York—*continued.*

Parishes.	Extent of Burial Grounds, and whether sufficient.	How often, if more than once buried over.	At what depth Burials can be made, and whether without disturbing recent Interments.	About how many the Monthly Average of Burials.
ST. MICHAEL-LE-BELFREY.	The burial ground, consecrated in August, 1800, is about 38 yards long, and 16 yards wide, utterly insufficient for the wants of the parish, containing, with St. Wilfred, Minster-yard, and Mint-yard, annexed thereto, a population of 3000 persons.	1100 interments since consecration. Has been entirely buried over three times. In many parts no burials can take place, being filled as high as it can be.	In some parts, graves may be dug five, or sometimes six feet deep; in no case can a grave be made, without disturbing former interments; sound coffins frequently exposed, and decayed ones, with bones, always unavoidably disinterred.	The interments average nearly 36 per annum.
ST. MICHAEL, SPURRIERGATE.	Church-yard very small, and not sufficient for the parish.	Has been buried over frequently.	A grave cannot be made of any considerable depth.	Monthly average of burials about one.
ST. MARTIN'S, CONEY-STREET.	The only burial-ground is that seen from the street, and very insufficient for the parish.	Has been buried over twice in the time of the present sexton, (about 20 or 25 years) consequently....	Graves cannot be made very deep.	The yearly average of burials about four or five, chiefly inside the church, now nearly filled; so that if deaths were to increase to any extent, recent graves must be dug up.
ST. OLAVE'S . . .	This burial-ground contains a surface of 3000 square yards, and is barely sufficient for the parish.	It has been so long a burial-ground, it must, of necessity, have been often buried over, and probably within the last 15 or 20 years.	It is possible to bury at the depth of 10 feet, though six feet is the usual depth; not necessary to disturb recent interments, excepting in family burial-places, &c.	Monthly average of burials is five; during the year ending December, 1830, it was nearly seven.
ST. SAVIOUR . . .	The church-yard is small .	Occupied in every part with graves; filled to very near the surface.	Cannot dig without disturbing the remains of a former interment.	Average number of funerals is four 5-12ths per month.
ST. MARY, BISHOPHILL, SEN.	The above remarks apply to this church-yard also, with this difference, that some parts of it are not quite so much occupied with graves	. . . .	. . . .	. . .
HOLY TRINITY, MICKLEGATE.	The burial-ground is about 48 yards long, and partly 14 and partly 28 yards broad, and is not sufficient for the increased population of the parish.	Appears to have been buried over, in every part, more than once.	Not possible to bury corpses below the ordinary depth, without disturbing recent interments.	The monthly average of burials for the last 10 years is two 1-12th. In 1827, the monthly average was three 1-6th.
HOLY TRINITY, GOODRAMGATE, and ST. JOHN DELPIKE.	The church-yard of the church of Holy Trinity, is not sufficient for these parishes.	Being a very ancient burial place, it is impossible to say how often it has been buried over.	In the south part, graves can only be made deep enough for one interment; in the north part, for three, in some cases, generally for two; rerent interments occasionally disturbed.	The average of burials is nearly three per month.
ST. JOHN, MICKLEGATE.	The church-yard is small .	Has been often dug over .	The graves are not deep, but decently so; but it is very difficult to avoid disturbing others.	The average of funerals is about one and a half per month. Extra parochial funerals avoided as much as possible, on account of the smallness of the burial-ground.
ST. HELEN. STONEGATE.	Burial-ground is very small indeed, and hardly sufficient for the few burials we generally have.	Should think it has been buried over two or three times at least; having sometimes to go below as many remains to deposit others.	Between five and six feet deep, the general depth.	Not commonly more than six or eight funerals in a year, but quite sufficient for the ground. A general burial-ground for each Ward without the Walls would be a great advantage.
ST. SAMPSON . .	Contains about 30 perches	Is situate close to the principal market place, and has been buried over many times.	No graves can be dug without disturbing former interments.	Average 30 per annum.
ST. GEORGE . . .	Contains 59 perches . .	An old burying-ground, re-inclosed lately.	. . . .	. .
ST. MARTIN CUM GREGORY.	Contains 37 perches . .	A very old yard in one of the principal thoroughfares.	. . . .	. . .

From the York Herald for June 23, 1832, the cholera being prevalent in York at the time.

REPORT on the EPIDEMICS of YORK, especially those prevalent in the 16th 17th and 18th Centuries, and on their connection with deficient Sanatory Regulations. By T. LAYCOCK, M.D., Physician to the York Dispensary.

DURING the middle ages, the towns and large cities of Europe were ravaged, at intervals, by destructive epidemics. The history of these "visitations," is of very great political importance, as I shall show subsequently, and I have therefore thought it would be proper to place on record some facts respecting them, and their prevalence in York, which have not hitherto been noticed.

The first notice I have met with is in connection with the "black death," a glandular typhus or plague, by which it is calculated 25,000,000 of persons perished in Europe only, during the years 1348 and 1349. In the latter year, according to Dr. Barnes, the historian of Edward the Third's reign, "in the City of York it raged furiously from about the Ascension, to the Feast of St. James the Apostle," that is to say from April to the end of July. As in London, so in York, the common grave-yards were insufficient for the interment of the dead. On the 10th July, 1349, a Commission was granted to the Bishop of Damascus to dedicate the chapel of St. Olave at Fulford, and the cemetery thereof, which is dependent on the church of St. Mary, York, "in regard ecclesiastical sepulture had ceased therein, by reason of a pestilence and great mortality had then reigned."* Mr. Thiselton, Registrar to the Dean and Chapter, has favoured me with a perusal of a manuscript copy of "Some Memoirs out of the Ecclesiastical Registers of York," in which there is the following entry:—"1368. The Chancellor, pres., John York to the school, though not Master of Art, such being scarce by the late mortality, Jan. 9." The black death "left scarcely a priest alive," but this entry is at too late a period to be referred to that destructive plague. A "great plague," however, broke out in London in 1363, and since the provinces rarely escaped, when the metropolis suffered, York and the North of England may have experienced unusual mortality at this date. Again, in 1379, according to Gent, "so great a mortality happened in the north, that encouraged the Scots to come into England, killing the sick, and driving the healthful into the southern parts." This is doubtful, but during the prevalence of the "black death," the Scots certainly made a foray into England, taking advantage of the weak condition of the population, and carried the disease back with them. Again, in 1390, the North of England suffered from a pestilence, in common with the whole kingdom, and Gent says that 11,000 persons were buried in York in that year; an incredible number, as it must have been much more than one-half of the population. The "sweating sickness," an epidemic resembling the cholera in all its most essential features, the only difference being, that in the one the skin, in the other the bowels were affected,† appeared first in England in August 1485, being imported, according to Hecker and preceding historians, by the Earl of Richmond's invading army. It is doubtful *a priori*, however, whether the "sweating sickness" was really a new disease, and imported as stated. Indeed, Hollingshed distinctly observes, that in the year 1252, "*sweats*, agues, and other diseases," prevailed in England after a dearth; a murrain among cattle following them in autumn. It is not a little remarkable too, that in June of this year, a pestilential disease was prevalent in York, as appears from the following entry in the corporation records.

"M^{r}. that the fift day of Juyn, in the secund yere of the reigne of King Ric. the Third.....cam in p'per p'sone before Nicholas Lancastre, mayre, and shewed how oone Robt Hewarth of York, shomaker, untowhome the said..... stode apprentise, licensed hyme for fere of the plage of pestilence that reigned to dep' frome his s'vice unto his p'per frends, and that he the said ..... suld wele and truly come agane to his s'vice unto the said Robt Heworth, assone as it shall pleas o' lord Jhu to sease the said plage, the forsaid ..... made a bodily othe upon tholy Evagelist before the said maire, desiring his lordship to testifie the same."‡

Mr. Davies seems to incline to the opinion that this plague, then in York, was the disease alluded to. He observes in a note,—

"From this memorandum we learn that a pestilential sickness, of so serious a nature as to be called the plague, was raging at York, early in the year 1485. It is recorded in Arnold's Chronicle (p. 38), that there was 'this yere a grete deth and hasty, callyd th' swetynge syknes," which proved fatal to two successive Lord Mayors, and several Aldermen of London, within a few days, during the month of September. On the 16th of August, when the York council were assembled upon receiving information of the Earl of Richmond's landing, no more than three aldermen, and seven of the twenty-four were present; and it is noticed, that the others were sojourning without the city, 'for the plage that reigneth.' By the alarming spread of this pestilence, the coronation of Henry VII. was delayed until the 30th of October. (Pol. Verg. 567.)"¶

It certainly seems probable that the disease observed in the army at Bosworth, in the

* From the records of the York Ecclesiastical Court, quoted in Collectio Rerum Eccles., by G. Lawton, Esq., vol. i., p. 44.

† In this disease, the sweat ran from the patient through the bed-clothes in a stinking stream; the voice was weak and tremulous, respiration difficult, the heart palpitated violently. The hands and feet turned blue, the nails were curved, and the skin wrinkled. The mind was rarely affected. It was as rapidly fatal as the cholera. "Some in one hour," writes Kaye, "many in two it destroyed, and at the longest, to them that merilye dined, it gave a sorrowful supper. As it founde them so it toke them, some in sleape, some in wake, some in mirthe, some in care, some fasting and some ful, some busy and some idle, and in one house sometyme three, sometyme fiue, sometyme seuen, sometyme eyght, sometyme more, sometyme all, of the whyche, if the haulfe in euerye towne escaped, it was thoughte great fauour."

‡ Extracts from the Municipal Records of the City of York, by Robert Davies, F.S.A., 8vo. 1843, p. 213.

¶ Ibid, p. 213.

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beginning of August, was the same as that prevailing at the same time in York. This would be a most interesting point to ascertain, which might be done by reference to contemporary records. The next "visitation" of the sweating sickness occurred, according to all historians, in 1506; but there is undoubted proof that the disease was prevailing in York in 1493, as the following extract from the manuscript "Memoirs," before quoted shows. "1493, William Beverley died, but his residence approved, though he had kept in two days of the sweating sickness. Jan. 4."

With the exception that Archbishop Rotherham died of the plague at Cawood, in 1500, caught probably at York, we find no record of an epidemic, until 1550. In that and the following year, it appears, both from the parochial register of St. Martin *cum* Gregory (the only one of that date in existence), and from the municipal records, that a contagious disease was exceedingly destructive in York, and created great alarm. I am indebted to Mr. Davies, the town clerk of York, for the following documents, which, as well as the statistical data from the parish register alluded to, are certainly unique. The first appears to have been preparatory.

"xvj die Februarij, Anno iiij^{to} R.R.
"John Lewes, Mayer, Edw. vj^{i}.

"Assemblyed in the Counsaill Chambre of Ousebryg, when & where the sayd presens dyd tayke one ordre as well for the relief of all suche persons as are visyted with the playg of pestylens in any place within this city & suburbes of the same, as also for the relief, help, & succour of all indigent & poore people, & especially suche as are impotent & not habyll to laybour."

From the following we may conclude that in May the disease had created more serious alarm, and was increasing in virulence.

"vij die Maij anno iiij^{to} R.R. Edw. vj^{i}.

"It was agreyd that all wardens in ther wardes shall generally take shuche ordre for savegard of this citie, that all those whiche be, or herafter shalbe, enfectyd with the plaige, shall kepe their owen howses, and to be preparyed for accordynglie. And if it forton any of them uppon great necessite to go abrode, then such as dothe goo abrode, shall have a white Rodd in ther hands thentent they may be knowen; and that every howse that is infectyd shall have Rede Crosse sat uppon the Dower; and also that suche as departith uppon the plaige shall be buryed uppon the day, and not uppon the nyght; and further, when any person is departyd, that ymediatlie before the corse shalbe hadd to the buryall, the bell shalbe knylled unto the corse be burryed; and further, that no Dogges go abrode in this citie uppon payn to forfait for every dogg that goith abrode vj^{s}. viij^{d}."

The mortality in the parish of St. Martin *cum* Gregory, for that year, seems uncertain. The entries in the register number 5 in July, 21 in August, 25 in September, 6 in October, 4 in November, and 6 in December. The average annual number of burials in the parish, for the eight or nine preceding years, was 5·43; so that the mortality, during the summer months only, had increased more than twelvefold; and as the population, estimated on the births and burials of previous years, would not be more than 212, about one in three died. The disease abated as winter advanced, for on the 12th January, 1551, the Lord Mayor wrote to the Lord President, stating that since Christmas not more than six persons had died of the plague, in all the city and suburbs, and at that time there was not one sick in all the city.

The respite, however, was but temporary as the disease reappeared with summer weather, and in June the authorities are again compelled to interfere.

"xxvj^{to}. die Junij, A^{o}. R.R. Edw. vj^{i} quinto.

"For soo moche as the Sykenesse hath nowe latly renewed in some parts of this citie. and specially of the Weast side of Ouse, and is feared to encrease onlesse bettar ordre be not herin had. It is therefore ordered, &c."

[To the same effect as to keeping house, and marking the houses with a red cross, as in the former order.]

This document is remarkable, as pointing to the locality of the disease, "the west side of the Ouse." The united parish of St. Martin *cum* Gregory is situate on that side, and again suffered severely, but not apparently at the date of the document just quoted; for there are no entries in the register of burials until September, in which month 5 are entered; then 20 in October, 14 in November, 1 in December. If the population of the parish be calculated at the same number as in the preceding year, namely, 212, the deaths are 1 in 4, and are again increased tenfold. From the entries we may infer that in June, July, and August few deaths had occurred in this parish, and we must look elsewhere for the *habitat* of the epidemic on "the west side of Ouse." Now the two parishes of St. Martin and St. Gregory are situate on the declivity trending towards the river, the parishes of All Saints, North-street, and St. John, Micklegate, and part of Bishophill Junior being between them and the river itself. It is to these parishes, and especially the two last, as being nearest the west side of Ouse, that we must infer the Lord Mayor alluded in his order of the 26th June. This being granted, we can easily see how in due course St. Martin cum Gregory would become infected in September and October. It should be added, however, that the entire absence of entries in June, July, or August, could scarcely depend on the circumstance that there were no deaths in those months. Above one-half of the estimated population of this parish was carried off in the two summers of 1550 and 1551; and as it was then, as now, one of the healthy parishes of York, the births annually exceeding the deaths by nearly 37 per cent., we cannot fairly estimate the deaths in the city generally from this epidemic at less than 1 in 2, or one half, but most probably the mortality was greater.

It is singular that, just as in 1485, the year in which historians assert the sweating sickness first appeared in England, York was infected with a plague, so in this its last

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recorded appearance in England, we find York again ravaged by an epidemic. Whether this was the true sweating sickness does not appear, but it is more than probable that it was.

The sanatory regulations of the day are curious. Above thirty years after their date we find it is ordered in London, by the Lord Mayor, that a red cross and "Lord have mercy upon us," be posted on all the houses infected with the plague, and persons going abroad from infected houses were required to carry a white rod in their hands, "two foot long." The red cross had an early reference to pestilences. In the "black death" of 1348, the flagellants, a sect of wandering ascetics, brought into existence by that terrible destroyer, wore red crosses upon their cloaks. Much light would no doubt be thrown upon the epidemics of this century by a diligent search in the valuable ecclesiastical records of our cathedral.

No further account of epidemical disease is met with from 1551 until 1604: "In this yeare," in the words of a city parish register, "was the greate plague in Yorke." But, in fact, what would now be esteemed a very high mortality was then little thought of, so numerous were the causes of disease and death during the middle ages. When the plague was absent, "the purples" (petechial fever), small-pox, autumnal cholera (termed "the plague in the guts") and exanthematous typhus were constantly rife. But while these destroyed only 1 in 10 or 15 of the population, "a great plague," or "great visitation," destroyed 1 in 2, or 3 or 4; and this was the kind of epidemic that happened in York in 1604. In the previous year (1603) the disease was prevalent in London; it was in Pontefract in the autumn of the same year, and only very gradually approached York in the spring of the year following.

From the documents found in the city archives it appears that the efforts of the authorities were directed principally against the propagation of infection by mendicants and vagrants generally. Apparently, no measures were adopted to purify the city from miasmata; and as there were wide stagnant moats, no drainage, narrow streets, and filthy open channels, the tide flowing above the city, and at ebb leaving sludge and mud on the deep banks of the river, and exposing the mouths of the sewers, the results may readily be anticipated. The disease broke out, according to tradition, in "The Hag-worm's Nest," or Beedham's-court, on the west side of the river, corresponding to the habitat of the plague in 1551 (*vide* map), and in a few months carried off 3,512 persons. The registers for that year of 17 parishes are extant (that of St. Nicholas is in the Will-office), and from these I have been enabled to make out the table subjoined, the clergy generally having rendered me all the assistance in their power. It is to be regretted that the registers of six large parishes are wanting for that year. The probable population in each parish is calculated on the average births and deaths in the four or five preceding years; the estimate for the whole city would be about 11,000, a number very near that fixed by Mr. Rickman in the census abstracts of 1831. A century later it was not 12,000. The deaths, therefore, from this plague would be at least about 1 in 3. The first entry of death from the epidemic is on June 4th, in the register of St. Michael, Spurriergate. It is a singular coincidence, that while the cholera commenced in the "Hag-worm's Nest," the traditional natal spot of the plague under consideration, and probably near to that of 1551—the first death from cholera took place also in the parish of St. Michael, Spurriergate, and on June 5th. The annexed drawing is of a street in this parish (First Water Lane), in which the cholera was most fatal, and in which the first death took place. The street is just wide enough for one cart to pass, and stands now as it probably stood in 1551 and 1604. June, indeed, appears to have been the epidemical month in York: on "June the fift," 1485, we find the apprentice of Robert Heworth was licensed by his master to leave York, "for fear of the plage of pestilence that reigned," and so with the other documents referring to 1550 and 1551. The first steps also of the plague seem to have been very similar to that of cholera, marking the badly drained districts by its course, as did the latter. The mortality attained its height in the several parishes of the city progressively, as will be seen by reference to the subjoined table of monthly deaths. The low lying parishes, namely, St. John, Micklegate, St. Michael, Spurriergate, St. Mary, Castlegate, All Saints, Pavement, and All Saints, North-street, first suffered in the order mentioned. St. Mary Bishophill Junior, adjoining Skeldergate, was ravaged concurrently with St. John, to which it is contiguous; and St. Martin cum Gregory concurrently with All Saints, North-street. Next in order were the parishes on the made ground between the two rivers, on the east bank of the river Foss, within the walls; then the eastern parishes; the outlying parishes suffering last.

TABLE 1.—STATISTICS of the Epidemic or Plague Year of 1604, in 17 Parishes of the City of York.

Name of Parish.	Population. According to Census of 1841.	Population. In 1604, calculated in the ratio of 1 birth to 22·4 1 death to 27.	Average Annual Number of Deaths previously to 1604.	Actual Number of Deaths in 1604.	Number of Inhabitants to one Death.	Actual Rate of Increase of Mortality in 1604, above Average.	Monthly Deaths in 1604, in 17 Parishes. January to April.	May.	June.	July.	August.	September.	October.	November.	December.	Total Deaths.
St. Mary, Bishophill, Jun.	1,747	252	10·4	110	2·29	10·58	..	8	10	36	18	15	9	8	5	110
St. John, Mickle-gate	1,004	437	15·0	103	4·24	6·20	4	..	14	29	34	20	2	..	..	103
St. Michael, Spurrier-gate	499	328†	11·0	107	3·07	9·73	10	2	3	23	43	20	2	2	2	107
St. Mary, Castle-gate	932	312†	..	104	..	..	..	..	..	27	55	11	10	1	..	104
All Saints, Pavement	417	295	10·25	97	3·04	9·46	11	3	4	14	37	11	7	4	6	97
All Saints, North Street	1,199	280	12·25	85	3·29	6·94	3	3	3	4	23	32	7	7	3	85
St. Martin cum Gregory	554	265	10·00	62	4·27	8·60	..	..	..	4	21	23	8	6	..	62
St. Martin, Coney Street	553	183	5·25	88	2·08	14·29	..	..	..	12	23	31	10	8	4	88
St. Crux	910	374	13·00	142	2·63	11·00	..	11	..	23	63	38	6	..	1	142
St. Dennis	1,311	365	16·00	150	2·43	9·38	4	..	8	28	61	31	11	4	3	150
St. Margaret	1,704	429	16·50	168	2·55	10·24	2	..	2	15	74	46	16	9	4	168
St. Helen, Stonegate	607	260	10·25	109	2·43	10·44	4	2	..	1	24	51	18	7	2	109
Holy Trinity, Goodram-gate	901	337	11·00	129	2·61	11·73	5	10	4	8	33	57	7	5	..	129
St. Saviour	2,359	..	12·25	118	..	9·63	..	..	..	to 9	19	63	24	3	..	118
St. Michael le Belfrey	1,637	770	31·25	134	5·50	4·44	14	15	1	8	29	39	26	12	3	134
Holy Trinity, Mickle-gate	1,159	670	26·00	272	2·09	10·46	12	7	4	17	59	94	47	19	13	272
St. Nicholas, (without Walmgate)	182	80†	..	42	2·00	41·00	..	1	..	..	12	22	5	..	2	42

Following the practice of their ancestors, the citizens left the city, and encamped on Hob Moor and on the Horsefair. Communication with the country was cut off, and crosses erected, a mile or two from the city, on three or four of the principal roads, that markets might be held around them. This pestilence extended, however, into the rural districts. It was at Stamford Bridge during the same summer, and in the following at Northallerton, Darnton, &c., as may be gathered from the parochial registers of those places.

In considering the table, with reference to the mortality from this epidemic in the different localities of the city, and to the more modern mortality, various discrepancies occur. Holy Trinity, Micklegate, now, and doubtless then, one of the healthiest parishes, lost, *apparently*, one half of its population; but as Hob Moor, where the citizens encamped, is situate in this parish, probably the number of burials was increased from this circumstance. On the other hand, St. John, Micklegate, now the worst parish in York, is one of the best in the table: the character of the population at the two periods will perhaps explain this. Many of the large houses now sublet to poor families were then the residences of wealthy merchants, who would be able to remove their families at once into the country. But its sanatory condition, even then, was lower than that of the higher situate parish of St. Martin *cum* Gregory in 1550 (see *ante*); for during the four preceding years the burials in the parish exceeded the baptisms by above 22 per cent. The parish of St. Helen, Stonegate, was in a very low sanatory condition, the deaths during the plague year being 1 in 2·24, and the burials exceeding the baptisms in the four preceding years nearly 100 per cent. With respect to the other parishes (except St. Martin, Coney-street), their mortality corresponds generally with their present state, and shows very strikingly how permanent the causes of a low sanatory condition are.

If the mortality from cholera had been as great as from this epidemic, the deaths would have been about 9,000 instead of 185. Indeed, it seems almost incredible that one-third (and even one-half) the population should have died; but this happened with the cholera in towns where filth and miasmata prevailed. It is manifest, from the repeated recurrence of the same name in the registers, that whole families were destroyed. In the register of St. Helen, Stonegate, the occupation or parentage of the deceased is stated, so that I am enabled to subjoin the deaths in a few families resident in that parish:—

Tomlinson, joiner.

Son Thomas, buried	26	September.
Daughter Ann	26	,,
Wife	27	,,
Son John	30	,,

John Wilson, clocksmith.

Son William, buried	15	August.
Anthony Leonis (his 'prentice)	26	,,
John Wilson, the clocksmith	28	,,

Richard Cararte, "potticary."

Richard Cararte, "the potticary," buried	2	September.
Son Robert	7	,,
Son Christopher	16	,,
Daughter Elizabeth	18	,,
Wife Cicelly	4	October.

Nicholas Criplenge, haberdasher.

*Ann, his wife, buried	30	August.
Daughter Mary	6	September.
Nicholas Criplenge, the haberdasher	8	,,
Son Thomas	10	,,
Son Robert	11	,,

Wm. Porson, the goldsmith.

Daughter Joan, buried	21	August.
Son John	23	,,
Daughter Eliza	23	,,
Son William	24	,,
Daughter Anne	1	September.
Wm. Porson, the goldsmith	7	,,

Ralfe Harveye, Imbrother.

Ralfe Harveye, Imbrother, buried	6	October.
Son Robert	3	November.
Daughter Elizabeth	4	,,
Wife Susanna	9	,,

* Her son Bartholomew was baptized on the 23rd; and this infant, as often happens to infants in epidemics, appears to have survived (probably the only one of the family), the name never occurring in the register of burials.

It is evident that the wife, son, and daughter of the embroiderer were away when he died, probably gone to their friends in the country; and a month after, in the beginning of November, when the deaths had almost ceased in their parish, had ventured back to look after their property, took the infection, and died, like their neighbours, within a few days of each other.

The above details need no comment; simple as they are, they sufficiently exhibit the domestic distress and desolation caused not only by this epidemic, but also by those oft-recurring pestilences of the previous centuries. Drake says this was the last of the plagues by which York was periodically visited; meaning, probably, that it was the last of the "great plagues." We have no further record of the epidemics of York until his own time, when Dr. Clifton Wintringham published an account of the weather and epidemic diseases of York for the twenty years from 1715 to 1735, and when the deaths were about 1 to 22, and exceeded the births by nearly 20 per cent. annually. This essay is a very interesting document, and it is a fortunate circumstance that his son, Sir Clifton Wintringham, republished it with the other works of his father. Its title is "Commentarius Nosologicus, Morbos Epidemicos et Aëris Variationes in Urbe Eboracensi Locisque Vicinis, per viginti Annos grassantes complectens. Editio tertia," (first published in 1739.)

From this essay it appears that York suffered constantly either from one epidemic or another. Small-pox appeared at three or four intervals during the 20 years over which his observations extend. In 1715 they assumed the confluent form, and a malignant type; in the subsequent year their virulence was diminished, and in the winter of 1717 they disappeared altogether. In April 1721 the measles were epidemic, and in the spring of 1723 the confluent small-pox re-appeared, accompanied in some instances with petechiæ. In September, 1725, the measles of a mild character became epidemic, and continued through the winter, and in the summer of 1726 the small-pox took their place, also in a milder form than in 1723. In the autumn of 1729, the distinct kind accompanied an epidemic influenza, and in the following year were associated with measles and other exanthemata. In the winter of 1731, they became more malignant in character, but disappeared almost entirely as summer advanced. In the spring of 1732, they re-appeared in the neighbourhood, were confluent, and in summer were prevalent in the city, but in a milder form. In the winter of 1733 the influenza which extended over Europe was prevalent in York, and there was with it a few cases of small-pox: in autumn the latter were more frequent, but of a milder kind, and maintained that character through the winter and spring of 1734: in the autumn of that year they became confluent.

The fevers noted by Wintringham were principally those dependent on malaria, and seemed to be every day diseases. Intermittents of every type appeared in spring and autumn; in summer, bilious remittents ending in regular intermittents. Cholera, dysentery, or intestinal inflammation usually prevailed in July, August, and September. Sometimes the cholera had a malignant type, and was fatal in a few hours, as in the summer of 1727. In May, 1719, a destructive "putrid fever," or, in other words, a typhus gravior broke out in York, and was at its height in July and August, just as in 1604 the plague was, 115 years before. Death in many cases followed on a sudden and violent diarrhœa, which symptom seems also to have preceded the outbreak of the fever. The weather was extremely hot and dry with little wind, and that little from the south until the middle of July, when a large quantity of rain fell, and the weather was cold for a fortnight; extreme heat then suddenly returned. It is remarkable, with reference to the sweating sickness, that in this fever, and in the summer remittents and continued fevers of succeeding years, copious partial or general sweats, with great depression of the powers of the system, were observed. In May, 1728, the "putrid fever" again broke out, concurrently with extreme heat after continued rains; it terminated occasionally in a fever of the remittent or intermittent form, as the heat declined. Wintringham remarks that, like all other epidemics he had noticed, it was ushered in by numerous cases of vomiting, diarrhœa, and profuse sweats, which he considered to be critical discharges of morbid humours, and as indicative of nature's method of cure. The "putrid fever" of this year was accompanied by an eruption not unlike flea-bites, and by a marbled redness of the skin, particularly about the chest. The breathing, before difficult, was relieved on the appearance of this eruption. This fever resembled, in all its essential circumstances, the puncticula, or febricula, called also febris stigmatica, and petechial fever, which prevailed in Europe first in 1490, and subsequently accompanied the sweating sickness. Hecker considers it to be a variety of the bubo or Levant plague; and it may be reckoned very properly amongst the pestilences of the city. In York, epidemic sore throat (scarlet fever of later years), preceded it in spring. Wintringham discusses the question how it was that the character of the fevers at York changed with the temperature; the malignant typhus becoming remittent as autumn advanced, the remittent changing into semi-tertian, quotidian, and tertian, coincidently with decrease of temperature, until quartans only appeared in winter, and then passing through the same phases reversely as the warmth of spring came on, and the heats of summer.* It is a remarkable lesson to theorists, that he

* "Quæst. 47. Annon successio harum febrium sibi invicem, pro ratione aucti vel diminuti caloris, tam in variis annis quam variis ejusdem anni tempestatibus, naturam et indolem earum eandem fere esse demonstrat; differentias autem a minori fluore lentores febrilis, et torpidiore sanguinis motu, in tempestate frigida; et a fluxiliori statu, agiliori motu, et majori forsan copia, acrimonia, et putredine in calidiore, plurimum pendere? durante autem calore regnavit febris putrida, hoc autem declinante, in intermittentem, et deinde hyemis frigore in quartanam convertebatur. Pari etiam ratione accedente vere, iterum surrexerunt

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neglected altogether the malaria arising from the stagnant surface water in the streets, from the putrid contents of the sewers, and from the deposits on the shores of the river, (as described by Dr. White,) and the effects of summer heat upon them, to discuss an unmeaning hypothesis.

The health of the city gradually improved concurrently with improved sewerage and drainage. The beneficial effects of Naburn Lock, and of a greater attention to architectural arrangements raised the ratio of mortality in 40 years from 1 in 21 to 1 in 28; so that the births exceeded the deaths; and for the first time, probably for centuries, the population of York increased independently of immigration. The epidemic exanthemata were still however fatally prevalent, as is shown by the numerous entries in the parochial registers, of death from small-pox and measles. The Rev. J. C. Camidge remarks that in the year 1785, of the 31 deaths registered in that year in St. Sampson's, 20, the number dying, aged under five years, were from small-pox. Statistical data of considerable value might be obtained from the parish registers commencing with 1770-1780; as the causes of death are generally stated, and no doubt correctly, so far as regards the exanthematous fevers.

In 1832, when the epidemic cholera first appeared in England, the sanatory condition was still low, although when compared with the previous century it was improved to an extraordinary degree. The moats of the city were yet open and full of stagnant water; many streets were imperfectly drained, and others not drained at all. It will be seen, from the list of streets drained, that active measures were taken to remedy these defects by devising and executing new drains. The moats were also covered in, the houses of the poor systematically visited and cleaned, nuisances of all kind inquired into and removed; and to complete the arrangements for the expected foe, a house of recovery established. These plans, devised by medical science and forethought, and carried out in concurrence with the gratuitous assistance of medical men, are in striking contrast with those of the authorities in 1604, and the results were proportionally different. On June 2nd, 1832, the first example of the new pestilence occurred in Beedham's-court ("the Hag-worm's Nest"), situate in the locality already marked out as the habitat of the pestilences of 1551 and 1604, and by the 17th ten cases had been treated in that filthy court. On June 5th, a street scarcely less impure, the First Water-lane, furnished the next case, and the first death; and by the 21st 30 examples of the disease had occurred in that district. Other low-lying, ill-kept, and badly-ventilated parts of the city were next visited, and by the 15th the cholera had made its way into Coppergate, Hungate, Walmgate, Fossgate, Tanner-row, and North-street. From thence it extended to other districts, and on August 13th 162 deaths were reported in the newspapers. The localities of 145 of these are stated in Table 11, in the Appendix to my report on the present sanatory condition of York. It shows distinctly the connection between miasma and the susceptibility of persons living amongst them to imbibe fatal infection. On October 22, the disease had entirely ceased in the city.

In reviewing this historical sketch of the epidemics of York, the first and most obvious general fact is, that they were all most prevalent during the summer, and quiescent during the winter. In 1551, for example, in January, there was not one sick person in the whole city; but in April, as the spring warmth came on, so did the pestilence, and by the end or June had attained such malignancy, that the cruel measure was adopted of cutting off afflicted families from the assistance of their neighbours, and confining the healthy members of those families to the infected and confined air of their houses.

The following table strikingly exhibits this connection between increased temperature and increased mortality.

TABLE 2.—Showing the Mortality in each Month, of the three Epidemics, 1550-1, 1604, and 1832.

—	June.	July.	August.	September.	October.	November.	December.	Total Deaths.	Numbers living to one Death.
Deaths in the Parish of St. Martin cum Gregory, during the prevalence of the "sweating sickness" (?) in 1550, 1551	..	5	21	30	26	18	7	107	2
Deaths during the "Plague" of 1604, in 17 parishes	53	249	638	793	115	93	45	1,913	3
Deaths from the "Cholera Spasmodica" of 1832, in the whole city of York	66	98	13	13	1	..	..	185	142

Further proof were scarcely wanting, as the history of all epidemics exhibits the same relations. The table is, however, a curious historical document, and is, I believe, unique. Indeed, our own modern experience of the cholera of the "plum season," recurs annually to convince us of this connexion, and every year people attribute their attacks of "bowel complaint" to eating plums, or toasted cheese, or salmon, or to any cause except the true one, namely, the miasmata evolved from stagnant water, or impure drains, by the heat of summer.

intermittentes, quæ pro ratione caloris adaucti, febribus continuis similiores evaserunt, quousque tandem auctis ulterius volatilitate, acredine, et putredine materiæ, febrem putridam producebant. Et annon, hoc sic se habere exinde etiam patet, quod quo magis ad intermittentes perfectas vergunt febres, et longiori intervallo sibi mutuo succedunt paroxysmi, eo cæteris paribus, dissolventia fortiora postulant, et vice versâ; ut tam in remittentibus quam intermittentibus quotidianis, tertianis, et quartanis videre est?" p. 295.

Now, no one would be so illogical as to infer that it was solely the higher temperature that increased the mortality in the preceding epidemics, or how could the healthiness of dry hot seasons or climates be understood? or the commencement and greater malignancy of these epidemics in the badly drained localities of the city be explained? But if we suppose that it was the heat of summer and moisture co-operating to facilitate the chemical decomposition of organic remains, we can readily explain the whole matter. This connection between pestilential diseases and the decomposing *debris* of towns, and of congregated human beings has indeed been long observed, although its vast importance has been rarely appreciated. Caius, (or Kaye) in his "Boke, or Counseill against the Disease, commonly called the Sweate, or Sweatyng Sicknesse," particularly refers to miasmata as the first cause, enumerating the foul air of camps, the emanations given off after great floods, or battles, or from putrefying locusts, or from the earth during earthquakes. "The v. cause," to quote his quaint language, "is close, and vnstirred aire, and therfore putrified or corrupt, out of old welles, holes in ye groūd made for grain, wherof many I did se in & about Pesaro, in Italy, by openīg thē aftre a great space, as both those coūtrimē do cōfesse, & also by exāple is declared, for ye manye in openīg thē vnwarely be killed." And his treatment is suitable to his doctrine: "Take away the causes we maye, in damnying diches, auoidynge cariōs, lettyng in open aire, shunning suche euil mistes as before spake of, not openynge or sturrynge euill brethynge places, landynge muddy and rottē groundes, burieng dede bodyes, kepyng canelles cleane, sinkes and easyng places sweat, remouynge dongehilles, boxe and euil sauouryng thynges, enhabitynge high and open places, close towarde the sowthe, shutte toward the winde, as reason wil & thexperience of M. Varro in the pestilēce at Corcyra confirmethe." At the time Kaye wrote the above, there was certainly large room for the removal of "the cause," for Erasmus asserted that in England "the floors of houses generally were made of nothing but loam, and are strewed with rushes, which being constantly put on fresh, without a removal of the old, remain lying there, in some cases, for 20 years, with fish-bones, broken victuals, and other filth underneath, and impregnated with the urine of dogs and men." The condition of the sewers and privies corresponded doubtless to that of the house. The epidemics of the middle ages were, in fact, so fatal and destructive, as described in the preceding pages almost solely in consequence of the deficient architectural arrangements of the towns, and the want of cleanliness. The population of Europe was thus kept down by pestilence, as well as by war and famine, and its social progress retarded to an extent really incalculable. If, throughout England, the cholera of 1832 had been one-half only so fatal as the black death of 1349, or even as several of the later epidemics, the frame-works of society would have been loosened, and the empire in danger of being broken up. Those acquainted with the social effects of these scourges upon the thinly-scattered population of the middle ages, would anticipate no less than this, from the destruction of five or six millions of persons in England within a few months. The utter depreciation of property, terror, despair, and a total abandonment of all social ties, would have been the consequence. In 1348, the people in general thought the springs and wells were poisoned, and thousands of Jews were slain with fire and sword as the poisoners, in conjunction with hundreds of Christians, their supposed accomplices. During the cholera epidemic in Europe, similar suspicions were muttered against medical practitioners, as well in England as on the continent; and some were even murdered in the streets of continental cities by mobs. Indeed it is but too probable, that if the deaths from cholera in England had increased, so as to equal the mortality from the black death, the popular frenzy would have wreaked itself in an irresistible paroxysm of national mania, first, on the practitioners, and then on any class to which private malice might direct its malignant attention. It must be remembered, Government was quite unprepared for results of this kind; the mortality only was thought of. In about 49 years, the population of England, already one of the most densely populated countries in Europe, will have doubled; and as the political danger of destructive epidemics increases with the population, it becomes an imperative duty to ascertain whether we are quite safe from the recurrence of these scourges; and if not, whether we have the means of placing ourselves beyond their reach. The state of our large towns and villages sufficiently answers the first; we certainly are *not* safe. With respect to the second, the more researches into the history of epidemics are prosecuted, and their nature ascertained, the more clearly it will appear, that by an improved system of public hygiene, society may be so shielded from their ravages, as almost in effect to disarm them. Even those more recondite causes of epidemics,—great cosmic or telluric changes,—may be rendered comparatively innoxious by a proper use of medical science and observation. Delay, however, is dangerous; for we may infer, from the experience of preceding epidemics, that the cholera will break out again, and its second advent may be with such a coincidence of atmospherical phenomena, as to equal in destructiveness the most virulent of the pestilences recorded in history. We may *hope* that this will not be the case; but when the momentous results of such a return are contemplated, society should have a more rational and certain safeguard against this and similar epidemics than an amiable hope.

York, March 23, 1844. T. Laycock, M.D.