affording definite information regarding the pathological processes in different cases of Bright's disease, it will, I think, have considerable value; and some facts which have come under my observation, at present too few and isolated for more than mention, make me hope that ultimately it may help us better to distinguish between morbid states included under the term and at present imperfectly distinguished.

THE DISSEMINATION OF ZYMOTIC DISEASE AMONGST THE PUBLIC BY TRADESPEOPLE.*

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THE subject of this paper will, doubtless, be regarded as one of an alarming character by the public at large, as highly objectionable by tradespeople, as very important by medical men in general, and as one of the highest interest and concern by medical officers of health.

The necessity of preventing trades from being so conducted as to be injurious to public and private interests is admitted on all hands. We have not only Acts of Parliament which regulate the employment of dangerous substances used in trades, such, for example, as the Petroleum Act, the Pharmacy Act, the Acts relating to explosive compounds, as gunpowder and nitro-glycerine; but we have Acts which, although imperfect in their nature, regulate to some degree factories, coal-mines, bakehouses, workshops, etc. The employment of labour in such trades as lucifer-match-making, fustian-cutting, the manufacture of mineral acids, of earthenware, glass, and metals, of percussion-caps, cartridges, paper, staining of prints, bleaching and dyeing, etc., is to a certain extent controlled. The first-named Acts, as also the Alkali Act, are designed to shield the public at large from the risk of an exposure to hurtful and poisonous substances, whilst the others are directed more especially to the prevention of injury to the health of those engaged in them, and to the non-employment of those who are physically unfit to be exposed to such unwholesome avocations. The protection of the public health by the regulation of offensive trades, such as those of blood, bone, tripe, and soap-boiling, and tallow-melting, is relegated to the Public Health Act of 1875, under which power is also given to compel the consumption of smoke in certain cases.

The existence of all these legal enactments shows conclusively that the principle of the regulation of trades has been deemed by the legislature to be sound, wholesome, and expedient.

Legislation has proceeded on the assumption that, if a trade be so managed as to be injurious to the health of those engaged in it, or to the public generally, or in such a manner as to be a nuisance, *alias* an excessive annoyance or danger to the public, the best practicable means of preventing the evil shall be adopted. The several Rivers Pollution Bills have been drawn with this self-evident desideratum steadily in view. The Rivers Pollution Bill that will sooner or later succeed in running the gauntlets of the Lords and Commons, will undoubtedly be thus framed;† and the Air Pollution Bill, which, I fear, is in the very far distance, must be supported on this basis, if ever it is to be a reality. The liberty-loving people of this free country would never be able to submit to such interference with, and control over, their modes of carrying on business for less important considerations than those of national health and wealth.

Admitting, then, the facts (1) that, in the interests of the public, it is highly desirable that trades should be supervised for public health purposes, and (2) that certain legal enactments at present exist of a very imperfect and limited character, having for their object the regulation of certain trades, so that they shall not be injurious to health, is it not a matter of logical necessity that, if it can be shown that there exist other trades not yet provided for, which are actively engaged every now and then in sowing broadcast the seeds of preventable disease, some remedy for such an anomalous state of things cannot be with any sense of consistency and justice longer withheld?

To prove to medical men, and especially to those amongst them who are engaged in the public health service of the country, that zymotic disease is disseminated by tradespeople amongst their unsuspecting customers, is really to waste time and to assume an ignorance of facts which they are constantly deploring. My object in addressing the Association on this subject is rather to suggest to and consult with those

medical men who are attending this gathering, as to the best mode in which the existing sanitary law could be so altered and modified as to protect the public from the dangers to which they are exposed in this direction. As these lines will be read, however, by many who do not belong to the medical profession, it will be useful for me to narrate briefly a few instances of the spread of zymotic disease by tradespeople amongst those whom they serve which have come under my immediate notice.

CASE I. Scarlet Fever in a Public-house.—Scarlet fever was exported from London into a public-house in Essex. Whilst the children of the publican lay ill of this disease in the bedroom, their mother, who was in constant attendance on them, descended to serve each customer who called to partake of refreshment. I, as medical officer of health, advised the temporary closure of this house of call, but my recommendations were unheeded. From that house, as was naturally to be expected, the fever spread into the surrounding parishes and deaths resulted. There was no legal power to compel a cessation of business during the presence of this communicable disease in the house. It was found that the publican could not be punished under Clause 126 of the Public Health Act of 1875.

CASE II. Outbreak of Typhoid Fever from Polluted Milk.—An outbreak of enteric fever occurred in a portion of the town of Brentwood. Whilst the houses of the families affected were provided with different modes of disposal of excrement, some draining into private cesspools and others discharging into the town-sewer, and whilst the water employed by all, with one exception, proved on analysis, although derived from different sources, to be very pure, there was one condition in common. They all, with one exception, drank milk from the same dairy, and the dairyman washed out his cans with water which was most offensive sewage-water. The exception to the rule was the case of a young man who did not deal with this dairyman, but who drank of the same water as that with which he manipulated his milk. I could not learn that anyone besides this young man employed this water for drinking purposes. I myself saw the milk-vendor milking his cows into a pail which resembled a filthy pig's bucket. His dairy where the milk was stored in large pans was situated virtually in a bedroom redolent of organic matter. My surprise was great to find that milk could be preserved for even a short time in a sweet state in such impure air. Why, I ask, should the lives of our children, who are the great milk-consumers, and our own lives be exposed to such dangers, when nothing would be easier than to have dairy establishments under proper sanitary control, in the same way as we at present have slaughter-houses?

CASE III. A Village School distributing Measles.—Measles appeared in a parish under my supervision. On investigation, it was discovered that the day-school was the centre from which it spread; for the children of the schoolmaster, who lived at the school, fell sick of the disease one after another and imparted it to the children who daily attended the school. I recommended that the schools which were busily engaged in infecting the parish should be temporarily closed.* The managers refused, on the plea that they should lose the Government grant, to secure which a certain number of attendances are necessary, although, when a school is closed by reason of the presence of epidemic disease, a reduction in the number requisite to secure the grant is allowed. There existed no legal power to compulsorily close the schools. Contrary to my advice, they were kept open, and they disseminated the disease in a most successful manner throughout the whole parish, which suffered severely.

CASE IV. Small-pox in a Public-house and Restaurant.—A traveller who was temporarily lodging in a public-house exhibited an eruption, which proved to be that of small-pox of a confluent kind. On entering the door of this house of public resort, I could distinctly recognise the peculiar smell characteristic of the disease. In the bar where men were drinking, the odour was still stronger. Trade was going on as usual. No remonstrance had any effect on the publican. There was no exposure of the sufferer, and it could not be proved that there was any exposure of infected articles. From this house the disease spread, and no legal means existed whereby the calamity could be prevented. The public were frightened some time ago by a report of the discovery of a bad case of small-pox lying in a shake-down bed in the kitchen of an eating-house in London. Some strong feelings were aroused as to the dangers to which people are exposed; but the circumstance was soon forgotten, and made no lasting impression on the public mind.

CASE V. Enteric Fever spread by a Tailoring Establishment.—A case of enteric fever appeared in the family of a tailor who lived in a small

* Read before the Public Medicine Section at the Annual Meeting of the British Medical Association in Sheffield, August 1876.

† Since writing the above, the Act of 1876 has, by the consent of all parties, been allowed to pass with a view to a settlement of the question. It insists on the adoption of "the best practicable and available means" for counteracting the evils with which it is supposed to war.

* The mere exclusion of the children belonging to an infected family from school will sometimes prevent the spread of such diseases as measles and scarlet fever. When several families of a parish are infected, the closure of the public school will be generally found the most effective method of limiting their diffusion.

four-roomed house in a terrace. This tailor was employed by the fashionable and principal tailor of the town, who displayed his goods in a large and handsome shop situated in the best street. The assistant-tailor, whose four-roomed cottage was his place of business, where clothes were made and repaired, employed under him a journeyman tailor and a sempstress, who lived near. On my visiting the assistant-tailor's house, I found that work was proceeding as if no fever existed upstairs. Clothes were being manufactured there for the fashionable tailor with the handsome shop, who would soon distribute them to the unsuspecting public. The journeyman tailor and the sempstress both received from the assistant-tailor some clothes to be repaired. Both became infected with the fever, and communicated it to others.

CASE VI. *Scarlet Fever in a Village Grocery Business and Post Office.*—A child of a village grocer, who was the postmaster of the district, became infected with scarlet fever, the poison of which was conveyed into the house from a distance. On ascertaining that the house was a small one, and that the mother and father passed from the bedside of the sick child into the shop to serve customers, and fearing, moreover, that the poison of the disease might be circulated through the agency of the post office, I recommended the temporary closure of the business. My advice was disregarded, and no power existed of compelling compliance. The disease, of course, spread throughout the village.

CASE VII. *Whooping-Cough in a Village Beer-shop.*—Whooping-cough of a fatal character being very prevalent in one part of my extensive district, destroying in about four months forty children, attempts were made to prevent the spread of the disease from any cases imported into the other parts of the district. A case was conveyed into a beer-shop, and infected all the children of the publican. This beer-shop was daily frequented by many of the fathers and mothers of the village, or their children. I myself saw children entering it, having been sent with jugs for beer by their parents. I recommended the publican to temporarily close his house of public call, pointing out the danger to the whole village which a refusal would involve. He quite acknowledged the risk to his customers, but assured me that he could not afford to temporarily close his business. This assurance would have been received by me *non grata*, had I not good reason for knowing that he spoke the truth. I asked the legal adviser of the Sanitary Authority whether some compensation could be granted him by the Authority, if the publican agreed to close his house, but found that the auditor would not sanction an outlay of this kind, as the law does not provide for such an expenditure of public money. The disease, as was only to be expected, spread amongst the customers, and occasioned three or four deaths.

The absence of any power to afford compensation has recently been authoritatively declared by the Local Government Board in the following case. Scarlet fever of a mild description was imported into the families of some "Peculiar People", living in a village, who kept the matter a secret. The children attended the National and Dame's Schools during the desquamative stage of the disease, and, through these schools, infected a portion of the village. I recommended that both of the schools should be temporarily closed. The clergyman of the parish, who had the control of the National Schools, consented. The periodical inspection and examination of the children had just been completed, and there was no danger of losing the grant. The old dame, who taught the very young children of the parish, and who had to maintain her still older husband (above eighty) out of her weekly earnings, also closed her school; but very naturally looked for some compensation, as she could not afford to be deprived of her weekly pittance. The legal adviser of the Sanitary Authority wrote to the Local Government Board, asking whether the Sanitary Authority could compensate the poor dame for the loss she would sustain by the closure of her school. The Local Government Board replied in the negative. In a former case of this kind, I was obliged to compensate the dame out of my own pocket, as it was impossible to allow the poor creature to suffer. If village dames refuse to close their schools when engaged in propagating disease, there exists no power to compel them to do so.

To detail more cases of this description is needless. Dozens, all telling the same tale, are to be found published in medical and sanitary journals. Perhaps the most recent in the recollection of sanitarians will be that of the distribution of the scarlet fever poison, through the medium of cream, at a West-end party; and that of the discovery of a case of small-pox in a milk-shop at Manchester.

A cottage, used as a laundry or as a butcher's-shop, may lodge in its bedrooms cases of typhus fever; a private school may disseminate scarlet fever through a district by means of its day scholars; a grocer's shop or a public-house may be served by those who have just come from the bedside of persons dying upstairs of small-pox; the cottage of the village postwoman may contain some communicable disease, the poison

of which she may distribute with the letters; and yet there exists no power to temporarily close such disease-spreading establishments.

I have written enough to show what dangers surround the public, and as to the state of helplessness in which medical officers of health find themselves, when they wish to prevent a tradesman from disseminating the poison of some disease with his wares, be it the milkman with sewage in his milk, or the schoolmaster who distributes a dose of the poison of measles with a knowledge of the three R's amongst the village children, or the sempstress, belonging to some drapery establishment, whose lodging may contain children labouring under malignant scarlet fever—a fact which may be unknown, in the absence of an Act for the compulsory registration of communicable disease, to any sanitary official. That our children should be subjected to the risk of being poisoned with sewage in their milk, because some milk-vendor chooses to wash out his cans and manipulate his milk with sewage-water; that our wives and that we ourselves should be exposed to the chance of infection from wearing clothes ordered at some respectable shop, and made in some garret full of fever or other contagious disease, the existence of which is kept a profound secret, is simply intolerable. If the liberty of the subject, about which we in this country hear so much, is to be maintained at the expense of a quiet submission to an exposure to such perils, I, for one, would pray the legislature for less liberty.

The question now arises, as to how this evil of the dissemination of zymotic disease by tradespeople can best be prevented. On this point, I doubt not, there will be some difference of opinion.

My own view is that it can be averted:

1. By placing the regulation of all trades under the control of the sanitary authorities and their officers (the power to compulsorily close a school or public-house, etc., when necessary, would be of course comprehended in an enactment of this kind);

2. By enabling a sanitary authority to grant compensation out of the rates, in cases of temporary closure of business for the protection of the public, when the sanitary authority has reasons for believing the truth of an allegation of inability to sustain pecuniary loss on account of poverty;

3. By extending the provisions of Clause 126 of the Public Health Act (1875), by inserting one making it a misdemeanour for persons to endanger the lives and health of their fellow-creatures by wilfully spreading communicable disease in any way—an amendment which has recently formed the subject of a petition of the health officers of the country to both Houses of Parliament.

The proposal to place trades under the control of the health authority of the district in which they may be situated must sooner or later be carried out. It is merely a question as to the time when the public will become as fully alive to the importance of the subject as medical men already are.

There can be nothing unfair in expending public money in giving compensation to a very poor and struggling tradesman, when a sanitary authority compulsorily closes for a short time his business in the interests of the public. Sanitary authorities already possess the power of giving compensation to the owner on account of bedding, clothing, and other articles exposed to infection which they wish to have destroyed.

Again, when schools are closed under the advice of the health authority, in consequence of the presence of infectious disease, a certain compensation is granted to them in not requiring the same number of attendances as is usually needful to secure the Government grant.

CLINICAL REMARKS ON A CASE OF ACUTE RHEUMATISM TREATED BY SALICIN.

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THE interesting observations which have recently been made on the use of salicin in the treatment of acute rheumatism justify the hope that we have a new and powerful remedy for many cases of this disease. I say many cases, because it appears to me that we must not expect to find a single drug universally potent against a condition like acute rheumatism. Notwithstanding their external similarity, cases of this disease differ greatly from one another, and each requires a preliminary study of its special characters to suggest the happiest treatment. Believing, as I do from observations made in this hospital,* that an excess of lactic acid in the system will produce acute rheumatism under favourable conditions, causing the joint and heart symptoms by its irritating qualities, and the

* Vide BRITISH MEDICAL JOURNAL, December 23rd, 1875; and author's *Clinical Medicine*.