

of Northern Medical Literature, those in the present number being for the first quarter of 1869.

We are happy to see that the success of the 'Northern Archives' has exceeded the expectations of its projectors, both in the number and value of the literary contributions sent in, and in the extent of the subscription list. This is no more than we should have expected from the evident hearty co-operation of the numerous band of zealous and able observers whose names stand recorded in the first volume of the first Journal ever sent forth as the general exponent of medical progress for the now professionally united kingdoms of Sweden, Norway, Denmark, and Finland.

WILLIAM DANIEL MOORE.

VII.—Baby-Killing.¹

IN the early part of the year before last some curious inquiries were made by a physician in London as to the real meaning of a class of advertisements which have of late become pretty numerous in the columns of the daily newspapers. These advertisements, for the most part, are more or less euphemistically worded, and purport to offer to ladies requiring temporary retirement, not only suitable apartments, but careful nursing and the services of an experienced medical man. In most cases there is something added, to the effect that the baby may be left or adopted. The memory of the revelations thus made and published in the 'British Medical Journal' cannot yet have quite faded away. Together with the facts elicited from time to time by inquests upon infants dying in what have of late been termed "baby-farms," they have served to lift a corner of the dense veil which conceals from the sight of decent and respectable people the hideous vices which underlie the polish of our modern civilization. Pharisaically hugging ourselves in satisfaction at our superior morality, we refuse habitually to have our equanimity disturbed by any suggestion that, after all, the outside crust may be a very thin one, and that by breaking it we may discover that we are little better than our neighbours. So long as we can ourselves lead peaceable lives, obtain all that we desire, and pursue our avocations and pleasures without hindrance, we of the easy sections of the community are very apt to give little thought to proceedings about us in which we suppose we have no concern. We charitably bestow a

¹ *Six Reports of the Coroner for Central Middlesex. Various Pamphlets and Papers.* By Mrs. BAINES. *ACTON on Prostitution.* Second edition.

sigh over the evil of the world that we hear about, or see flaunted in our eyes if we chance to wander out after dark. We are, possibly, roused to something like indignation at some flagrant cruelty reported in the newspaper, but our sentiments of pity or anger rarely carry us much further; certainly there are few who, taking up the clue which is offered, follow the thread as it winds through the maze constructed by human depravity. It is to the credit of our profession that, brought by our daily duties more than any other class of persons into relation with the sins and follies of the world, while ministering to those who suffer from them, we have done our utmost to arouse public attention and to direct public effort towards the application of a remedy.

If it be said that, as medical men, we have nothing legitimately to do with moral delinquencies, that we should leave them to be investigated and dealt with by the politician and jurist, we reply, first, that in so far as they have any operation in the production of disease and in increasing mortality, they ought not to be overlooked by a class of observers intent on searching out the causes of each, with a view to mitigation; and secondly, that such delinquencies occupy so prominent a place, and form so often the ultimate issue of etiological inquiries, that we could not ignore them even if we would. Moral and physical evils are so inextricably interwoven that it is out of our power to separate them, except by doing violence to truth and nature. In laying bare, therefore, as we now propose to do, what we esteem some main causes of the unnecessary destruction of infant life in this country, we shall limit ourselves by no restrictions of this sort, but shall follow in the track of those writers, both private and official, who have considered that their position as medical men was no valid reason for shutting their eyes to facts which commend themselves more particularly to the consideration of the social reformer.

In the course of the five years, 1863 to 1867, the Registrar-General has recorded, as having occurred in England and Wales, 578,394 deaths of infants before they had attained one year of life. He does not enlighten us as to the distribution of these deaths through the several periods of this short space of existence; but those persons who have access to the original registers can satisfy themselves of this fact, that at least half of the total number of these short-lived beings come to their end before the expiration of three months from their birth. We may even venture a step further, and say that, counting back from the end of the first year to the earliest weeks of existence, there will be observed a progressive increase in the number of infants whose deaths go to swell our mortuary tables.

Of those beings who meet with their death in the womb, or during the process of expulsion, which we designate as "still-born" infants, we have in this country, unhappily, no record whatsoever. This is one of the blots on our registration arrangements. There is some reason to believe that they would be found to constitute between 5 and 6 per cent. of all births. It is said that this is the ratio in the Netherlands, which is regarded by Dr. Elisha Harris as about the normal rate in civilised countries. Probably in large cities, such as London, it would be found to be greater. In New York the ratio is as high as between 17 and 18 per cent. But as regards our own country, as we have shown, we can only speculate. Human nature is much the same everywhere; and when there is no fear of detection, the temptation to a criminal neglect of those precautions which the accoucheur takes to preserve the life of the child during the act of parturition is, probably, too strong to be resisted in many cases where opposing motives have little cause for existence.

Of children stillborn in Italy, in 1864, the illegitimate births were more than three times as numerous as the legitimate. We have before us the six annual reports of the coroner for Central Middlesex; and we find that of 136 inquests held on the bodies of new-born infants, in as many as 119 a verdict of stillborn, or prematurely born, was recorded. In each year the majority of these were bodies which had been thrown away and picked up in the streets. Dr. Lankester says—

"If the question is asked as to whether any moral guilt is implied in the death of these stillborn children? I answer at once that there is as much reason to suppose that their lives have been sacrificed as there is of those who breathed after they came into the world. The facts on which I rely are the following:—In the first place these children are found with the cord untied, and all other marks of the neglect of any attendance upon the mother during her delivery as in the case of the liveborn children. In the next place they are found deposited in streets, gardens, and quiet places, under the same circumstances as liveborn children. We are, therefore, driven to the conclusion that they are the offspring of women who have had no assistance at their labour, and who have concealed the birth of their offspring" (4th report, p. 8).

Suspended animation is no rare event for the newly born infant; and where no end but shame is to be gained by the life of the infant child, it may readily be left to pass into actual death. That, when this last happens, it is in most instances the result of the absence of proper care, seems to be shown, not only by the ordinary success which attends the efforts of the accoucheur to resuscitate such children, but from some remarkable facts

recorded by observers on the Continent which indicate an occasional capability on the part of the newly born infant of retaining vitality under the most unfavorable conditions. We allude to instances of newly born infants having been actually interred as dead, but resuscitated after remaining in this condition for several hours, recorded by Maschka, of Prague, in 1854, and by M. Badinet, of Limoges, in 1865. It is observable that in one of Maschka's cases, notwithstanding the resuscitation, the lungs, when the child died, as it appears soon to have done, presented no evidence of having respired. "It cannot be doubted," says Caspar, referring to cases of this kind, "that a child possessing only this pseudo-life can be killed passively as well as actively, by omission as well as commission." All such omission, of course, is not criminal, some of it may be purely the result of accident; much, probably, is the result of ignorance; but it is difficult to clear our minds of a very strong suspicion, if not of a belief, that very much is of a different character. Until our registration laws are amended, and the registration of all births, whether of live or dead children, is rendered compulsory; until more strict statutory regulations are framed, by which the surreptitious disposal of the bodies of newly born infants may be impeded, we shall never know for certain how often the fruit of illicit connections is blasted at the very birth. Let us add, that the absence of such laws in this country can serve no purpose except the concealment of crime and the promotion of demoralisation.

Passing, however, now to a point at which our national statistical records become available, we find that we may compare the 578,394 deaths of infants under one year with 3,730,613 living births, this number being made up of the annual births from 1864 to 1867 inclusive and the mean births of the two years 1862, 1863. The comparison informs us that, of the children born during this period in England and Wales, 15.5 per cent. died in the course of their first year.¹ This is the mean for the whole of England; but, as manifestly violent deaths are not excluded, or deaths the result of ignorance or carelessness, the 15.5 per cent. cannot be regarded as a normal infant death rate under circumstances where such causes are not operating. We desire to know what death rate is to be regarded as inevitable, under tolerably favorable circumstances, for infants up to the end of the first year. The Society of Friends in this country forms a community whose infant death rate may be usefully considered in this point of view. During

¹ It is evident from this that Mrs. Baines greatly exaggerates when she says that from forty-three to forty-five infant deaths take place in every hundred births.

the five years 1863-7, in the families of the members of this small society, there occurred 147 deaths of infants under one year of age, which may be compared with 1323 births computed as before.¹ This will give a death ratio within the first year of life of 11.1 per cent. In these families there are none really destitute, marriages are usually contracted with some regard to prudence, and, as a rule, not at a very early period of life, while domestic training gives fair prospect of care being bestowed upon the young. If we may accept their ratio as a normal death rate under favorable conditions, we arrive at this, that the infant death rate of England is nearly half as large again as it ought to be, and have next to inquire how it is that in the five years referred to 164,190 deaths happened more than there was due and proper cause for happening. Were it possible to make a strict inquiry into the circumstances of the death of every infant, it is scarcely to be doubted that among those whose deaths we are now going to enumerate would be found the items which go to make up the excess.

Deaths the causes of which were not specified when registered	12,458
Sudden deaths, the causes of which were never ascertained	3,879
Deaths from violence	8,398
Want of breast milk	6,595
Diarrhœa	54,274
Thrush	5,060
Atrophy and debility	107,825
Teething	10,459
Convulsions	105,294
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	314,242

We shall not be considered as extravagant in asserting that half of these 314,242 deaths, at least, ought not to have occurred at all; that they would represent roughly, for the five years referred to, the amount of unnecessary destruction of infant life due to active or passive criminality, ignorance, and carelessness.

But we do not propose to discuss the mode of origin of these causes of infant death separately. If we did so we should probably find that, for practical purposes, the terms under which these deaths were registered were mutually convertible. That the deprivation of breast-milk, from which between 6000 and 7000 infants died, was, in the vast majority of instances, a violent interference with the operation of a natural instinct, and not the result of maternal incapacity; and that the diarrhœa, thrush, marasmus, and convulsions were, with few exceptions,

¹ For these numbers we are indebted to Mr. Charles Hoyland, the recording clerk of the society.

associated with either entire withdrawal of the breast, or with the substitution, in part, of improper food, such as the infant organs are neither fitted for nor capable of digesting or assimilating, with neglect, or with drugging. We have made these few cursory and preliminary remarks merely with the view of showing, in the rough, the magnitude of an evil which we ought to deplore and try to remedy: in pursuing our subject we propose to limit ourselves to considering the relation to it of two social faults, namely, the voluntary abandonment of maternal duty (but for different reasons) by the rich and the poor, and irregular and immoral relationships between the sexes resulting in illegitimacy of offspring.

We shall say very little about the position of those women whose young infants are sacrificed to the necessities of labour. Their case is often a sad one; it is a story which repeats itself daily in our manufacturing centres where female labour is in request, and it has been told over and over again. There is nothing new about it. The life of a female factory hand is something such as this. She commences to work at a very early age, as soon, indeed, as she can be of use to earn a little money. Formerly she used to be taken from school as young as seven or ten years of age, but the Factory Acts now require that her schooling shall not be entirely interrupted, and for some years she spends her time between school and the factory. When emancipated from the former, her time is all devoted to work, until the evening, when she usually finds amusement with her companions in the factory of both sexes. If she does not fall into evil ways, and not seldom if she does, she marries or settles in one way or another early. If she is a good hand, and earns high wages, she is not unlikely to be picked up by some lazy fellow on the look-out for a young woman whose earnings will keep him while he drinks his brains away in the beerhouse. Anyhow, her marriage makes no difference in her work, except that, in addition to her factory occupations, she has her home to see to, her own and her husband's clothes to wash and mend, and meals to prepare. In due time she becomes pregnant, but still has to go to her work up to her very confinement. Can it be wondered at that such a woman is unfitted to be a mother?—without any knowledge of domestic economy, and without any of that experience in the management of an infant which she might have acquired at home in different circumstances, or with a sort of experience which is worse than none at all,—the traditionary treatment of infants which she has seen pursued in her own family under similar conditions. The period of enforced rest is all time lost; a month or six weeks pass, and she is again at the factory; her

earnings are regarded as too valuable to be dispensed with. What, then, becomes of the baby? It is treated just as its mother was treated before it. No doubt it is a wretch at first to find that the baby must be left all day in charge of some old woman or child who is glad to earn a few pence for taking care of it; but time abates this feeling, and it is succeeded by more or less indifference, the very death of the child being, perhaps, regarded as a relief. Such a woman may take charge of the infants of several factory hands, and the latter have been seen early on a winter morning hurrying along to the nursery, in their way to work, carrying through the cold and sleet their half-dressed infant, huddled up with its clothes and the food for the day. Where, then, are the comforts and tender cares that the infant of a few weeks old absolutely lives upon? The only time that the child can be suckled is in the intervals of work at meal times, when the mother has to get her own food, and when home for the night. At other times the infant must be fed artificially by the woman or child in charge. Those who have watched this feeding tell us that the food mostly consists of bread softened and made into a pap with water and a little sugar; and even this is not smoothly made, but presents the appearance of lumps floating in the water, being hastily prepared and given at any temperature that may chance, and as quickly as the infant can be got to swallow it from a spoon. Milk is too dear, and besides, there is a tradition among some mothers that when a child is partially suckled cow's milk is likely to disagree. The process of feeding, in short, and general management are much the same as may be observed any day among the labouring poor in London, and in day nurseries, where children are similarly left while the mother is at work. For the system referred to is not confined to our manufacturing towns. It may be seen in operation in any parish in the metropolis. We are ourselves quite familiar with the sight, and also with that of the puny, pale, old-looking babies lying in their cradles, in the dark, sickly-smelling, unventilated attic. That the little beings, deprived of the cosy warmth of a mother's breast, of the only food that they can properly digest and of the little cares and caresses that a mother only can bestow, should suffer from this treatment is nothing surprising. Flatulency, indigestion, diarrhœa, thrush, convulsions, and the like host of infant maladies, become their almost inevitable portion; and at night the fractious infant is lulled to rest by a dose of Godfrey or other narcotic, that the wearied parents may not be deprived of the sleep that they require to prepare them for the next day's labour. It is not unlikely that the dose at night is often not the only one that the child gets in the course of the twenty-four

hours; for a room full of crying children could not be borne with when so simple a domestic remedy as an opiate or a little gin will send them off to sleep.

In a paper by Dr. Greenhow, a few years ago, it is calculated that at least ten gallons of Godfrey's Cordial were sold in Coventry alone every week, a quantity equal to 12,000 ordinary doses; and a druggist in Nottingham, whose word could be relied upon, stated that he himself sold 400 gallons of laudanum annually, of which he believed that one half was administered to infants. And thus these infants are nursed to death. It is no matter of astonishment that there are many factory hands who have lost nearly all their children in early infancy, or that, when evil days have come upon their trade, and the mothers have been thus forcibly detained from work, the infant mortality has been observed to fall!

We have no hope that in these days of fierce competition female factory labour has any chance of being dispensed with. The establishment of public day-nurseries, under proper and intelligent supervision, is calculated in a degree to mitigate the evil; but more is to be looked for from the charitable indulgence of masters, furnishing opportunities for the proper periodical suckling of the infants, and from the spread of domestic knowledge among the hands themselves, who should be taught that true economy lies in the mother's performance of home duties, and in learning to promote the comfort of the husband and children by making the most profitable use of their earnings.

But let us turn to another class. What is to be said of mothers whom no such imperative necessity can be supposed to bind, and who abstain from performing their maternal duties that they may be free to spend their time in the frivolities of fashionable society? Probably a luxurious life is not the best preparation for suckling an infant, while the capacity of the mother to afford proper and sufficient nutriment is lessened by everything which stimulates the nervous functions at the expense of lowering the bodily powers. Such mothers as these, and some who, without their excuse, decline to suckle their infants because they do not like the trouble, commonly depute the task to a wet nurse. Some, we are ready to admit, take this step for the only valid reason, namely, that if they did not the infant would have to be brought up by hand. The practice of putting out infants to wet-nurse is not followed here to the extent that it seems to be in Paris, where from a very early period (it is stated ever since the year 1350) laws have been framed for the regulation of nurses, the protection of the child, and the avoidance of imposition. In fact, in France, such nursing is a recognised business, which can only be carried on

under the supervision of the police authorities. Out of a mean of about 53,000 infants born in Paris, 18,000, or one in every three, are sent into the country to be nursed, by far the greater number through the agency of some dozen offices for nurses established in that city. M. Husson states that from 1839 to 1858 the mean mortality of the nurse children under one year, placed out and looked after by the "Direction des nourrices," was nearly 30 per cent., and from 1859 to 1864 nearly 34 per cent. Three fourths of these infants were legitimate, and so under the most favorable conditions for living. The mortality among the "enfants assistés" was very much greater, namely, nearly 56 per cent. between 1839 and 1858, descending, however, in 1864, to 39 per cent. This was in the department of "la Seine." In other departments, where the children are not so well looked after, and where the infants of this class are not brought up as they ought to be at the breast, the mortality has ranged from 59 to over 90 per cent. It has been observed that the greater part of the nurse children die in the course of the first week of removal. With us the practice of wet-nursing is carried out in a different manner. The wet-nurse is usually taken into the family, and so is kept more or less under the supervision of the mother, and in this way some dangers to the life of the infant are avoided.

The propriety of "wet-nursing," under any circumstances, has been a subject of much discussion. The objections to it that have been raised are mainly these, first that it is immoral, and secondly that it is unnecessary. A very energetic and well-meaning lady, Mrs. Baines, has taken infinite trouble to impress her opinion upon this subject upon English women and medical men; and in summarising her views, as expressed in a variety of papers and pamphlets with which she has favoured us, we shall probably succeed in stating nearly all that can be said against the use of a wet-nurse. If a wet-nurse be engaged, either because a wealthy mother cannot or will not suckle her own infant, not one only but two infants are deprived of their natural and rightful nutriment—the infant of the nurse and the nurseling. With respect to the former there can be little question that invariably, or almost invariably, the nurse's child is brought up artificially, and that it depends very much upon the wages received, and upon the possibility of confiding its care to a careful relative, whether or not the artificial feeding will be a success, or whether upon it the infant will pine away and die as dry-nursed infants so commonly do. With respect to the latter, we imagine few medical men will be found to agree entirely with Mrs. Baines. Of course the best thing is that the infant should be suckled by its own mother, but we can hardly regard

the deprivation as a serious matter as regards the nutriment simply, so long as her breast is merely replaced by that of another healthy woman. Mrs. Baines, our readers probably know, has a "theory" to support her in this opinion of hers. We will quote her own words. "The milk of a stranger is not the fitting substitute. '*No other milk than the mother's can suit her own child, and her milk is not proper for any other child.*' This peculiarity belonging to individual milk is not to be discovered by an analysis of its elements; these resemble each other, with little variation, in different specimens of the same kind of milk; and by a chemical comparison of the elements in the milks of different animals, the relative proportions of these elements are found scarcely to vary at all; but the milk of each individual—speaking more particularly of human milk—possesses its own peculiar *quality*, or *essence*, or *power*, which cannot be detected by any known processes of analytical chemistry." Mrs. Baines adds, "This *theory* of a subtle existence in milk will be received, I am aware, with considerable caution, perhaps with much mistrust. It cannot but be expected that so novel a proposition will be questioned; the possibility of such an 'essence,' however, cannot be denied, for however remote the final decision of the question may be, who amongst us can say without presumption, 'it is not so?'"

A truly feminine line of argument, about which our chivalry will permit us to say no more than this, that possibly the author of the "theory" might find a sufficient explanation of any difference in result of feeding from the mother's or a stranger's breast in the different amount of care bestowed by a mother or a nurse upon the infant, in the sentiments with which it is regarded on either side, and on some consequent or associated modification in the quantity and readiness of the supply, perhaps even in its quality, such as chemical analysis *might* be able to determine. The influence of emotion upon the secretion of human milk is well known. If another explanation be needed it might be, perhaps, occasionally found in the very different kind of life led by a nurse introduced into a respectable family to that which she has been accustomed to. Mrs. Baines considers that it is wrong to tempt a woman by money to forsake her own baby, and sees no qualifying, no extenuating circumstances in the case of an unmarried woman thus selling her milk. In a question of casuistry we may presume to differ somewhat from Mrs. Baines. It has been urged that to a girl who has an illegitimate baby, a path of return from vice is opened to her by employing her as a wet-nurse, "as though," says Mrs. Baines, "that were the *only* employment available as a means of escape from future sin. But numerous other occupations offer, which it is not

necessary to enumerate." We think that we have a right to ask for their enumeration, for Mrs. Baines has to show us how a girl, so situated and forsaken by her friends, can maintain herself, and also devote time to the care and nursing of her infant. We confess we are not so sanguine or clear-sighted as this lady. Let her read Mr. Acton's book on the causes of prostitution, and she will learn how difficult it is for a friendless girl in London to maintain herself alone by such labour as she can obtain without quitting her home. We confess that, for our own part, we can conceive the hiring of herself to be a wet-nurse as a very venial fault, if a fault at all, while we can regard it, at other times, as a deadly sin. It is assuredly the latter if a girl, anxious to be rid of her offspring, or careless of what becomes of it, places it where she has no good reason to know that it will be properly brought up; and if the girl's hirer, thoughtless of all interests but those of her own infant, so selfishly uses the natural heritage of another as to bring about, thoughtlessly, its untimely death. On the other hand, the magnitude of the fault on both sides is evidently greatly reduced where the hirer, as bound by morality to do, conscientiously busies herself to care for the bereaved infant, sees that it is properly placed out, carefully and judiciously fed and nursed, and, should occasion arise, is restored to its own mother. We condemn, as loudly as any one, the cold-blooded manner in which it is but too customary to transact the business of hiring a wet-nurse. If hirers of wet-nurses would only act as conscience must tell them they ought to act in this matter, the principal moral objection to the adoption of the system would be done away with, and a real good might be occasionally done to a girl sometimes more sinned against than sinning. We have said that we believe wet-nursing to be often adopted very improperly and unnecessarily, but there are instances where it is the only remedy applicable for the preservation of the life of an infant deprived by any cause of its mother's breast. With such precautions as we have indicated, we think that medical men are in such cases perfectly justified, both on medical and moral grounds, in recommending the hire of a wet-nurse.

But it has been maintained that, besides promoting immorality and crime, the practice of wet nursing is unnecessary, inasmuch as infants deprived of their mother's breast can be successfully reared upon artificial food. Mrs. Baines says, "I could cite cases where delicate infants who have not thriven upon the 'hired breast' have become robust and strong by means of judicious feeding." Every practitioner probably could do the same, but all we imagine would be able to find a reason for this, other than the general rule that artificial feeding is to be pre-

ferred to a stranger's breast. Conversely, however, there are abundant instances where artificial feeding of various kinds has failed, and recourse has been had at last, and perhaps only just in time, to the "hired breast." She adds, however, "I admit that such instances are rare, from the want of intelligent trained nursemaids. This is the grand difficulty: who is to be trusted to conduct the hand feeding judiciously? and what is the substitute for the breast which is to be preferred? In reply to the first question, Mrs. Baines suggests that young ladies who now overstock the governess market should be trained as nursery directresses; and that, being received into families on a superior footing to an ordinary servant, they should be charged with these important duties—a confession that nothing but a social revolution, such as we can scarcely hope to see effected in our days, will meet the difficulty. With regard to the second question, the replies would be various. Physiology, at least that sort of unquestionable physiology which the late Dr. Latham recommends us to use for practical purposes, would teach us that the proper kind of artificial food would be one which approaches most nearly to the natural food of which the infant has been deprived, and that it ought to contain no alimentary elements of a character different from those contained in human milk. Such a food then we should seek in the milk of some domestic animal. The cow, the ass, and the goat, are the animals to which we should probably direct our view. As respects the ass, we may remark, that the milk is not only too watery, but is remarkably deficient in butter and casein, elements which cannot be supplied. The milk of the goat is exceedingly rich in casein, but is otherwise unobjectionable; so that the suggestion which has been made by Dr. Routh and others, that infants should be put to the animal to suckle, deserves at any rate a fair practical trial, although the milk would not appear suitable for a very young infant, inasmuch as the milk of the human female at the commencement of lactation contains a minimum of casein. For such, cow's milk is better adapted, modified by manipulation in such a manner as to bring the relative proportions of its several ingredients into accord with the age of the infant to be fed. Cow's milk differs from early human milk in containing, at least, twice as much casein and an excess of butter. Hence cow's milk rich in cream being selected, it may be diluted at first with an equal quantity of water, the sugar (very abundant at first in woman's milk) being brought up by the addition of about two drachms of sugar of milk to each pint manipulated. As the infant grows older the milk may be less diluted, and the quantity of added sugar reduced to half the above quantity. In London and large towns where

milk is systematically sold ready diluted, it would be necessary to estimate the dilution undergone by the lactometer, and modify the manipulation accordingly. Mrs. Baines suggests that, by modifying the food of cows, their milk might be made to approximate more closely to human milk, but as yet we are aware of no observations tending to show the practicability of the plan. The teaching of physiology is confirmed by that of experience, which has decided against the employment of farinaceous articles as an addition to the food of young infants. Mrs. Baines regards the professional objection to such additions as the result of prejudice, affirming that the evil results which have been observed to follow their use, arise from bad management, and not from the indigestibility for the infant of the articles themselves. Especially she recommends the addition of wheat flour on the ground of its alkalinity, asserting that, while human milk is alkaline, cow's milk has an acid reaction. Probably she would find, if she made the experiment, that cow's milk, like human milk, is alkaline when fresh drawn, only becoming acid as it stands by conversion of the sugar. The proper precaution would be, not to add a substance foreign to the infant's stomach, but to use milk freshly drawn from the cow, or preserved for use in as cold and clean a place as possible.

Professor Liebig, viewing the question as a chemist, has introduced to the public a "food for infants" as "a complete substitute for that provided by nature." The directions he gives for its preparation are as follow:—"Place in a small saucepan half an ounce of wheat flour, to which add by degrees, and continually stirring, five ounces of (skimmed) cow's milk. Let it boil for about three or four minutes, after which remove it from the fire. Now weigh one part (half an ounce) of malt flour, mix it carefully with thirty drops of solution of carbonate of potash (containing 11 per cent. of carbonate), together with two parts (one ounce) of water. Add this mixture—continually stirring—to the milk pap; after which cover the vessel to avoid its getting cold, and let it stand for one hour and a half. After the addition of the malt flour the vessel should be put into hot, almost boiling water, or near the fire, to keep the mixture warm, which hereby gets thinner and sweeter. After this the whole is again put on the fire to boil up once more, and now the food is to be strained through a muslin or fine hair sieve." It seems to be generally admitted by the panegyrists of this food that it requires to be diluted for the newly born baby. The principle on which its preparation mainly depends is, "the transformation of starch flour into sugar, and the supply of the failing alkali in the milk."

Baron Liebig has stated that thousands of infants of

the Teutonic race have during the last two years been fed with his preparation, and have done marvellously well upon it. M. Poggiale in a communication made to the Académie de Médecine, has denied its similar applicability to the Latin race as tested by experience. He objects to it mainly on the following grounds, namely, because it differs from woman's milk and that of the cow both in physical properties and composition; because it is a chemical preparation demanding the performance of many careful and skilful operations; because M. Liebig has replaced the fatty matter of the milk by glucose, which does not produce the same physiological effects in the economy; and because it is a coarse imitation of natural milk based upon only one and that a very questionable analysis. He prefers cow's milk in the default of maternal milk. After all, we imagine the point to be determined is a practical one, and as yet we are acquainted with no published observations showing accurately its value as a substitute for the milk of the mother for very young infants. In one instance related by Dr. Hecker in the appendix to Liebig's pamphlet, it was found necessary to fall back from this food to the use of a wet nurse, when the infant who had dwindled away upon the former quickly recovered. Certainly we do not think it is yet satisfactorily proved that any kind of artificial feeding is equal in safety, for a young infant deprived of its mother's milk, to the use of a wet-nurse.

We may now pass on to inquire into the relation of illegitimacy to our high infant mortality. And here we are met with the primary difficulty that we have no record of the number of illegitimate infants born (whether dead or alive), and no distinction in the mortuary tables issued from the general register office between the deaths of legitimate and illegitimate children. Where a mother wishes to conceal her fault, and most mothers pregnant out of wedlock may be regarded as thus situated, there is no law to compel her to register the birth, the law only requires that there shall be no concealment of it. Hence our birth-registers probably represent only a fraction of the illegitimate births that actually occur; and when we are told, authoritatively, that illegitimacy is on the decrease in this country, we may accept the statement as only so far true that it represents the reduced number of illegitimate births registered. The fact may merely mean that the mothers of such infants shrink more than they used to do from the proclamation of their shame. "It is," writes Dr. Greenhow, "an unquestioned fact that the rate of illegitimacy of birth is sometimes very large, where the death rate of young children is high; but there is at present no satisfactory proof that these stand to each other in the relation of

cause and effect." The registers, for example, during the ten years 1850 to 1859 show that, in Nottingham, with a ratio of 10.04 per cent. of illegitimate births, the annual average deaths per 1000 of infants under one year was 222.6, while at Wolverhampton the average of similar deaths was as high as 203.3, although the illegitimate birth ratio was only 5.65 per cent. of all births. Turning then to our judicial and criminal annals, we ask what they can show us upon this subject. Mr. Acton writes thus :

"In the year 1867, 1153 inquests were held upon illegitimate children, aged one year and under, against 2960 inquests held upon legitimate children of like age ; so that though the proportion of legitimate to illegitimate children exceeds 16 to 1, the number of inquests held upon the former are little more than double the number of those held upon the latter, thus presenting a ratio of inquests held on illegitimate children eight times as high as it ought to be, taking as our mean the number of the deaths occurring among the legitimate A little further examination of the figures at our disposal seems to place almost beyond the possibility of doubt the supposition, that a large proportion of the illegitimate children brought into the world meet with a violent, or at least premature end. We find that the number of inquests held on illegitimate [legitimate?] children of the age of one year, but under seven, amounted to 2960, while the number held upon legitimate [illegitimate?] children of a like age reaches only to 201. There is here a preponderance of illegitimate deaths striking enough to call forth suspicions of foul play ; but, as compared with the discrepancy exhibited by the earlier period, the proportion has fallen off from one half to one fourteenth. Clearly the time of the strongest temptation to tampering with the life of the infant is during the earliest stage of existence," p. 284.

Dr. Lankester argues much in the same way. In his sixth annual report he writes thus :

"In my own district I find that inquests held on illegitimate children are nearly half those held on legitimate children. When it is remembered that only one child in seventeen is born illegitimate in England, it will at once be seen how large a proportion of these children die under circumstances that demand inquiry. About the same proportion of inquests is held throughout the country, as I find, by the judicial statistics of 1866 that there were 2844 inquests held on legitimate children, whilst there were 1349 held on illegitimate children. Another curious fact connected with these statistics is the disproportion of inquests held on illegitimate and legitimate children between the ages of one and seven years. In my own district, in 1866, there were only eight inquests on illegitimate children between these ages, whilst on legitimate children there were 160 inquests. In the same year, in all England and Wales, there were 190 inquests on illegitimate children, whilst there were 2649 on legitimate

children. This drives us to the conclusion that the illegitimate children are either better treated between one and nine, which is very improbable, or that the large number of them are killed before they reach the age of seven years."—P. 26.

We are not disposed to place the full reliance on such statistics which Mr. Acton and Dr. Lankester do, for two reasons, the first being the uncertainty which attends the enumeration of the illegitimate births in the country, and the second that the proportion of inquests held upon legitimate and illegitimate infants cannot be held to exhibit the relative mortality of the two classes. Inquests are only held where there is something to lead to a belief that an infant may not have had fair play. Now, with legitimate infants it is natural that this belief should be less likely to arise than in the case of the illegitimate, although the circumstances of the two may be in other respects similar. At the same time this line of argument is not without its value, especially when it is kept in mind that suspected and convicted criminals form but a small proportion of the actual existant criminals in any population. It is highly probable that, as all the illegitimate births are not registered, so nothing near the full number of unnatural deaths of illegitimate children come to light, either by coroners' inquisitions or otherwise.

Illegitimate infants are not necessarily, or even usually, put out of the way directly; more commonly indirect means are employed. Still the statistics of the general register office tell us that, in the five years 1863-7, out of the 8398 violent deaths of infants under 1 year of age, 874 were proved to be instances of direct infanticide; and of these 810 infants were murdered within a month of the time of their birth. Of these we find that 218 were strangled, or otherwise suffocated, 59 were killed by blows fracturing the skull by cutting or by stabbing, 51 by intentional neglect, 22 by drowning, 9 by exposure to cold, and 7 by the simple proceeding of leaving the cord untied at birth. The total number of violent deaths of infants under one month of age during the five years, was 3720; the most frequent causes of death being stated to be suffocation in different ways, 1429, navel hæmorrhage 559, neglect or exposure to cold 342, opium in some shape 55, the remainder being burns or scalds.

The deaths registered as infanticide cannot be regarded as including all the deaths thus occurring, even where the verdict of a coroner's jury has exonerated the mother, or those in care of the child, for a reason given by Dr. Lankester, namely, the inconsistent manner in which verdicts of wilful murder are returned in different districts. After showing from the judicial statistics of 1866 how irregular these verdicts are in different

parts, both of the country and of the metropolis, he goes on to say, speaking of Middlesex :

“ It will be seen that just in proportion to the number of verdicts of ‘ wilful murder ’ on newly born children is the smallness of the number of verdicts of ‘ found dead.’ The ‘ judicial statistics ’ do not give the ages of the persons on whom verdicts of ‘ found dead ’ have been held. At the same time, I have no hesitation in expressing my conviction that in by far the larger proportion of these verdicts the inquests were held on the bodies of newly born children. It is the same in other counties. I take the large county of Lancashire, with its teeming population of Manchester and Liverpool. In the whole of that county, in 1866, there were but twelve verdicts of ‘ wilful murder ’ on children under one year of age ; but when we turn to the verdicts of ‘ found dead,’ we find them amount to 506. This is a larger number in proportion to the population than in London itself, and it is the same in other of our manufacturing and thickly populated counties. It is very clear, therefore, that the verdicts of ‘ wilful murder ’ returned by coroner’s courts is no index at all to the amount of infanticide that exists in the whole country. . . . There is, however, still one method left by which we may arrive at a conclusion as to whether the infanticide which is so pronounced in the central and western districts of the metropolis is common throughout England and Wales. I have shown that when verdicts of ‘ wilful murder ’ are not returned, there is reason to believe, from the numbers of cases ‘ found dead,’ that this crime is really involved. The gross number of cases in which verdicts of found dead are returned, as supplied by the judicial statistics for England and Wales, is 2700. Now, I have shown that, in a large majority of cases, these must be instances of children found dead and exposed. In these cases there is, no doubt, a certain percentage due to the discovery of children above one year of age, and to adult persons ; but from my own experience these cases are very few. Taking the year 1866, in which my own returns of ‘ found dead ’ amounted to nine cases, I find that only six of these cases were of persons over five years of age. . . . I think, then, that I have a right to conclude that at least 2500 children are annually found in England and Wales, exposed to the grave suspicion of having been murdered by their parents. . . . There can be no doubt that the origin of this crime is the existence of immorality between the sexes. In these cases it is not a question of prostitution. It is not the prostitute who is the mother of the murdered child, but a woman who has been drawn from the paths of virtue by a seducer ” (6th Annual Report, p. 30).

We think this is fair argument, and that the estimate of the coroner for Central Middlesex is a probable minimum of direct infanticide ; but we have a good deal to add to this if we would arrive at the total of annual untimely deaths of infants due to illegitimate connections. We have to trace the woman and her

infant a little further in life, and see what becomes of the former, and how she disposes of her offspring, when she does not directly kill it. The mother, deserted or neglected by her relatives and lover, must live, and to do this usually only three courses are open to her, burthened, as she is, with an infant. Not one man in fifty, we are told by Dr. Lankester, contributes anything to the support of his bastard child; the utmost which the mother can claim by law is 2s. 6d. per week; and for this there are few women who will put the law in force. Hence, she must either obtain employment at home, or she must have recourse to prostitution, or she must put away her child to nurse, in order to be free for entering upon domestic service as a wet-nurse or otherwise.

The scanty wages obtainable by needlework, to which most women have recourse, almost necessitate their being supplemented by prostitution: and in this way the infant may be preserved from losing its natural nutriment and mother's care; but in any other case, the child must either be disposed of by casting away or by being relegated to the care of a stranger to be brought up by hand. Where one woman takes charge thus of a number of nurselings, the term "baby-farming" has been applied of late years. Most of the infants found in baby-farms are illegitimate. Mr. Acton thus describes the system:

"By it we understand the taking off the parents' hands of infants, by midwives and others, for a consideration. This consideration may consist of payment, made either in a lump sum or by instalments. The number of children that a woman may have under her care at any one time is unlimited. The receiver need not possess any qualification requisite for the due performance of the duties that she undertakes; she need take out no license, and is subject to no inspection or supervision. The women who adopt the calling are, as a rule, of unscrupulous character, and inhabit low and unhealthy neighbourhoods. The facilities afforded by such a system, for the disposal of infant encumbrances, are at once apparent. The chances that the infants will receive fair play at the hands of their strange foster-mothers are small indeed, when we consider that their gains are large in proportion to the number of children received, the shortness of the period over which they survive, and the amount expended on them during that period. It is difficult to ascertain with accuracy the number of the children in this country annually placed in the hands of baby-farmers; if I put it at 30,000, I shall, probably, be under the mark. Even at this computation, it is frightful to contemplate the waste of life and the misery that is going on year by year in our midst, without any serious effort being made to provide a remedy" (p. 281).

These baby-farmers are in communication with another class

of women, who receive into their houses systematically, and as a matter of trade, women who, being in trouble, desire to be clandestinely delivered. It is these women whose advertisements are alluded to at the commencement of our article. By the women who conduct these establishments, some of them situated in respectable streets in London and its suburbs, a complete baby trade is carried on. They take the baby off the hands of their clients on payment of a lump sum, and have various modes of disposing of it to profit. Sometimes a childless couple will be found to adopt the infant in good faith, and will pay for the privilege. Sometimes it is a childless wife, who, hoping to gratify while deceiving her husband, or with other motives, will go through the farce of a mock confinement, and present the bastard as her own legitimate offspring. In such cases the infant is well off; but if no such chance should turn up, the woman who keeps the house has other resources. If sufficiently paid for her risk, the baby will unfortunately be born dead, or if living will be handed over, with a portion of the gains, to the baby-farmer, on the understanding that no one shall be troubled with the infant again.

Other practices are carried on at some of these houses which the law regards severely. In one of the houses described in the papers before referred to in the 'British Medical Journal,' abortion might be obtained on the payment of a considerable sum of money. To make matters worse, this house was regularly attended by a practitioner in public repute, who, probably without his sanction, was actually referred to in proof that the operation would be conducted with safety to the applicant. Houses of this kind abound in London, and are excused as necessities.

The writer of the paper referred to gives a graphic description of one baby-farm out of many which he visited ('Brit. Med. Journ.,' March 28th, 1868). On inspecting the death registers he found that no less than seven deaths of infants, under the care of the woman who kept this farm, had happened in the course of two years. They were as follows:—An infant, aged 11 days, legitimate, of "jaundice;" an infant, aged 14 days, illegitimate, "want of breast-milk;" an infant, aged 3 months, illegitimate "marasmus;" an infant, aged 6 months, illegitimate, "diarrhœa;" an infant, aged 6 months, registered as the son of a baronet, but born in a poor and low street, "congestion of the lungs;" an infant, aged 10 months, illegitimate, "convulsions;" and an infant, aged 12 months, illegitimate, "dentition and convulsions." In the course of our own duties we recently had occasion to visit a similar place ourselves, where not only infants were taken in from the birth, but where very young children were taken, at

the same time, for day-nursing. It was a wretched, ill-lighted, and ill-ventilated garret, in the suburbs of London, where infants and young children, to the number of four or six, and aged from a few days to three years, spent the whole day, and the babies the night also, in charge during the day of a young girl, who had the feeding and care of them. The elder infants were commonly brought at about seven or eight o'clock in the morning, and taken away from nine to eleven o'clock at night. A more miserable set of children we have never seen together. To this house two infants were brought about eighteen months ago from an establishment for the reception and care of the infants of fallen women, and after a few days they were attacked with diarrhœa. They were removed, and we did not hear what became of them. About twelve months ago a female brought there an infant a few hours after birth, stating that it was her daughter's child. In about eight days it was taken ill and died, and the body was taken away by the same woman that brought it. Another infant, the illegitimate child of a servant in a respectable family, by the son of the lady of the house, was brought when about two weeks old; it was soon taken ill, carried backwards and forwards to a doctor at some distance, and died within three weeks, being buried at the expense of the family. Each death in such a house of such a child is doubtless regarded as a "happy release" for all parties concerned. There is always consolation in the thought that the little dear has been taken to a "better place." As to "still-born" children, or those who die fairly or foully within a day or two of birth, undertakers can at any time be found to smuggle them away, giving them Christian burial, and asking no inconvenient questions; but still, of course, "for a consideration."

If, then, we do not know from our national statistics all that we may desire, and probably ought to be able to learn of the influence of illegitimacy upon the unnecessary deaths of our young infants, we still know enough to assure us that it is closely associated with a large amount of crime in the direct or indirect killing of the offspring of unlawful connections, and certainly with very much more than ever comes to light. Were we asked what remedies are applicable to this state of affairs, we should be disposed to say that they should consist in the abolition of the present opportunities of concealment, in an amendment of our bastardy laws, and in a modification in the punishment awarded by the law to the crime of infanticide.

With a view to removing opportunity for concealment, we consider, in the first place, that the registration of every birth that takes place should be rendered compulsory by law, and this whether the infant be born prematurely or at full period, alive

or dead. The registration of births is compulsory in Scotland, and Ireland; and we see no good reason why England and Wales should be exempt from the operation of so salutary a law. Next it is to be observed that, as things stand at present, a registration of death can be made without any other cause being assigned than that which the person effecting the registration chooses to give. In some cases persons keeping chemists' shops have presumed to sign certificates of the causes of death, and medical men have been found who would do so without having seen the subject, either alive or dead, or only when dying, and under circumstances precluding a proper diagnosis. To obviate this loose procedure it should be made necessary to produce, at the time of registration, a certificate from a properly qualified practitioner, that he has had proper opportunities for forming an opinion, and specifying the cause of the death. Under other circumstances, as when death occurs suddenly, or without medical attendance, either the coroner or some officer of the sanitary authority of the district should be required to investigate the circumstances. Six years ago the Metropolitan Association of Health officers represented their views upon this subject to the Registrar-General, urging the necessity of these changes in the law, but nothing came of the communication, as that officer found a difficulty in concurring with the views of the association, and especially with the proposal of registering stillbirths. Thirdly, we think that some statutory check should be placed upon the practice so common among undertakers of disposing surreptitiously of the bodies of infants dying unbaptized and unregistered, in the coffins of other persons or otherwise, and also upon the loose manner in which the bodies of persons are interred in some cemeteries without the production of the registrar's certificate. We have known of instances where this has been kept back by an undertaker upon one pretence or another, thus enabling him to make use of it for the burial of another person that there might be some reason for not registering.

We are not prepared to say that houses to which females moving in the better classes of society, who so far forget themselves as to become pregnant, may retire during the period of their confinement, ought to be mercilessly suppressed. There may be, and probably are, good reasons for the assertion that their existence is a necessity of the times; but they should be put under some sort of authoritative supervision; they should be known to the authorities of the place, and for this purpose registered and licensed, and should be continually kept under the eye of a judicious medical officer. The authorities should grant a license to no person whose character will not bear a full investigation, and the medical attendant of the house and the nurses

should be known and approved of. The same may be said of "baby-farms."

Mr. Acton, in his book on prostitution, dwells at length upon the necessity that there is for an alteration in the bastardy laws, if a check is to be placed upon the wholesale destruction, directly or indirectly, of illegitimate infants. Starting from the proposition that the bastardy law of 1834 is founded upon the mistake that women are the best protectors of their own honour, a proposition to which every man in good position "gives the lie every day of his life, his anxious thought being how best to guard his own daughters from the pollutions which surround even them;" and from the fact that while the weak side of woman's nature, her vanity, love of approbation, and self-sacrificing affection, are taken advantage of by the seducer, whose only motive is the satisfaction of his gross passions, he argues that, as the law stands, the stronger and active party to the sin is permitted to escape, while the whole burthen of the result is thrown upon the weaker and passive sex. She can herself sustain no action for seduction, her only remedy being that she may apply to a bench of magistrates for a summons, obtaining an order in bastardy, entitling her to a maximum sum of half a crown a week for the support of the child up to thirteen years of age. If she declines to make this application, no one can compel her to do so, nor can parish authorities, to whom she and her infant may become chargeable, do it in her behalf. Mr. Acton's remedy is this:

"I would exact, by the help of society, that, in the first place, the seduction of a female, properly proved, should involve the male in a heavy pecuniary fine, according to his position, not at all by way of punishment, but to strengthen, by the very firm abutment of the breeches-pocket both him and his good resolutions against the temptations and force of designing woman. I would not offer the latter, as I foresee will be instantaneously objected, this bounty upon sinfulness—this incentive to be a seducer; but, on the contrary, the money should be due to the community, and recoverable in the County Court or Superior Court, at the suit of the Government Board, and should be invested by the treasurer of such court or by the county, or by some public trustee in bastardy, for the benefit of the mother and child. The child's portion of the fund should be retained by such public officer until the risk of its becoming chargeable to the community, *quasi* bastard, should be removed by the mother's marriage or otherwise, and the mother's share should be for her benefit as an emigration fund or marriage portion" (p. 275).

Holding, as we believe it must generally be admitted, that the intentions of the founder of the Foundling Hospital in London

have been entirely departed from, in the modern management of the charity, Mr. Acton submits that Parliament ought "to interfere, and to appropriate the funds on the *cy-près* doctrine to such object analogous to the founder's intention as shall produce to society the greatest amount of benefit," namely, by setting on foot an institution having for its end objects such as those for whose promotion that charity was endowed :

"I propose the establishment of a Government Board or other competent authority, to whom application may be made in cases of pregnancy by the woman herself or her parents or master or mistress, or other responsible person, whose duty it should be to investigate the truth of the statements on which such application may be founded, and if satisfied of their truth, to take charge of the pregnant woman thrown out of a situation, affording her work and assistance until confinement and during her lying-in. It should further be the duty of the board to settle, at the time of the application, the question of paternity; and if the seducer have left the neighbourhood, to discover and fix upon him the duty of providing for the child when born" (p. 287).

He proposes to apply the funds accruing for the help and education of illegitimate children, and that subsidiary institutions should be provided throughout the country. He believes that, were mothers thus relieved, a large number would be rescued from their position by marriage with their first paramours, when the latter were persons in the same rank of life with themselves; for others situations might be found as wet-nurses, and that illegitimacy might certainly be checked, and its sad consequences much softened to the unhappy mother. Furthermore, he says—

"I propose that the power of granting licenses and exercising supervision over all baby-farmers should be vested in this board. All persons wishing to adopt the calling might be required to send in their name and testimonials to it, and to receive a license from it on showing themselves to be fit and proper persons to receive one; such license should be renewed annually, and a small payment might be made, as duty thereon, by the recipients. The names of all persons licensed might be registered; the number of babies to be received should be limited, and the receivers should be required to make a return to the board of all infants confided to them, with such particulars as it should seem from time to time necessary to require; and their houses should be at all times open to inspection by the officers of the board. It should also be made illegal for persons to adopt any children without first satisfying the board as to their ability to maintain them when adopted" (p. 288).

We have made these copious extracts from Mr. Acton's book, not because we see the remotest chance of his suggestions being

adopted in this generation, but because it is apparent that he has given much close thought to a very difficult and complicated subject, and has sketched out a scheme which, if not practicable as yet, is, notwithstanding, consistent.

We shall say very little upon our last remedy, namely, the modification that is necessary in the punishment attached by the law to infanticide. Regarded as murder, and undistinguished from other murders, jurors revolt from convicting in the most flagrant and obvious cases; and the punishment of death seems unmistakably to secure the offender even from the stigma of a murderess, and only serves to ensure her acquittal of the capital crime. If the woman be alone, as she, probably, would be during the act, the jury would be informed that they must be satisfied that the infant was fully born, or the case falls to the ground. She may, indeed, be prosecuted, under a second indictment, for concealment of birth; but this is an evasion which adds nothing to the majesty of the law. As Dr. Lankester says—

“She may conceal her pregnancy, murder her offspring, and if she does not conceal the dead body of her child no punishment awaits her. Within my knowledge, women have barbarously murdered their offspring by strangling them, drowning them and stabbing them, have confessed this crime, and when placed before a criminal court have been acquitted. This has, undoubtedly, arisen from the sympathy of the judge and jury with the women who have been the subject of outrage, and who have been betrayed into crime which forfeits their lives by others who do not share in their condemnation. The law of England, by which capital punishment is inflicted on women who destroy their offspring, is felt to be so severe that judge and jury alike shut their eyes to the facts of the case, and wilfully excuse those who have subjected themselves to its penalties. It is needless to dwell on the immoral effect of the existence of a law which is never carried into practice” (6th Report, p. 33).

However these questions of bastardy, infanticide, and baby-farming, may ultimately be dealt with, it is quite evident that the time has fully arrived when they should receive the thoughtful consideration of the Imperial Parliament. It is nearly forty years since our present bastardy law was enacted; and during the intervening period, questions of social importance have risen to the surface and received an amount of attention from all classes of the educated community, at any rate equal to that which has been bestowed upon any matter of general political interest. Public sentiment upon many of these questions has been greatly modified concurrently with the advance of public information.

Neither can we refuse to see that the educational and religious

efforts of the last thirty or forty years have resulted in a higher sense of moral obligation. We perceive it manifested on all sides at public gatherings for political as well as social objects. We see it in the changes which have been made in the laws of bankruptcy, in our factory acts, in the attempts to legislate against fraudulent adulterations of food and articles of commerce, in the tone adopted by candidates upon the hustings, and by ministers of the crown in parliament. We cannot believe that the whole of this is hypocritical. There is a growing feeling that right should prevail over expediency and might. On this feeling we depend, to this we believe we may firmly trust for many much-needed social reforms.

E. BALLARD.

VIII.—Wharton Jones on Failure of Sight.¹

MR. JONES divides his work into three parts, of which the first treats of the pathology of the amaurotic failure of sight caused by railway and other injuries of the spinal cord; the second, of the pathology of the same condition, caused by similar injuries of the brain; whilst the third part treats of its diagnosis, prognosis, and treatment. A very large portion of the first part is occupied with the consideration of various physiological facts connected with the circulation of the blood, of the phenomena attendant upon the inflammatory process, and of the physiology of the action of the iris, with the influence upon it of mydriatics and myotics—a portion so large, indeed, that it may be doubted whether it does not exceed in length, as it certainly does in interest, that which is devoted to the proper subject of the work.

It will be observed that in the clinical section of the treatise the topics embraced by Mr. Jones almost exclusively relate to the intra-spinal and intra-cranial conditions leading to amaurosis; and we find little or no remark made upon direct lesions of the organ itself, such as detachment of the retina and cataract, though we have seen more than one case where the latter affection has been believed to be caused or its progress hastened by a violent concussion of the head. Mr. Jones's object is, therefore, to show the symptoms, diagnosis, and treatment of amaurosis resulting from concussion or other affection of the central parts of the nervous system.

¹ *Failure of Sight from Railway and other Injuries of the Spine and Head, its Nature and Treatment, with a Physiological and Pathological disquisition into the influence of the Vasomotor Nerves on the Circulation of the Blood in the Extreme Vessels.* By THOMAS WHARTON JONES, F.R.S., F.R.C.S., &c. London, pp. 309. 1869.