

## **The Influence of Home Conditions during the First Five Years of Life on the Physical and Mental Health of Children\***

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In medicine, as in most things in this world, events move in cycles. Ideas swing into fashion and out of fashion again, and change almost as quickly as fashion itself. In the Victorian era children were to be seen and not heard; but towards the end of the last century we discovered people as individuals, and children as people. The pendulum swung to the other extreme and children, though fewer in number, achieved increasing importance and finally completely stole the limelight. Everything faded into insignificance beside the importance of each individual child. We had reached the furthest extreme of the swing of the pendulum and now it began to return. Bowlby<sup>1</sup> in his World Health Organisation Survey of 1950-1951 summed up the change by stressing the importance of maternal care in child health. The child could not be studied as an isolated unit, it depended on, and was united too closely with, its mother, especially in the early years of life. The centre of study must move from its narrow focus upon the child to include the mother-child relationship. Once the scope of study had been widened, it was soon widened still further, and it is significant that by 1955 this essay should be related not to the growth, development or nourishment of a child, but to the effect of home conditions upon its health and development, for we have swung in our thinking from the household to the individual and back again to the home unit.

The important factors in the background of the child's early years are not only food and drink and cubic space, but also the factors which contribute to the general atmosphere of his home. We have as yet little precise knowledge of the nature of these factors or how they work. It was hoped at one time that the Child Guidance clinics would be able to direct home makers and parents, so that children might grow up more healthy and well balanced; but they have been overwhelmed with children in an advanced state of mental and emotional disorder, and the long and intensive treatment necessary for these children has absorbed the entire time and energy of their staffs. Stone,<sup>2</sup> in a recent lecture, pleaded that the conditions influencing children from birth should be more intensively studied, so that treatment could be begun much

\* An abridged version of the essay which was awarded the second prize.

earlier, or made unnecessary by adjustment of factors influencing the child.

Attention to the physical care of infants during this century, and improved public health and hygiene, have done much to reduce mortality and morbidity among children; but it has gradually dawned upon us, that absence of malnutrition and physical defect does not necessarily make for full life or useful citizenship. The six-foot strong man, who can lift a hundredweight with one hand, is of no use if he is perpetually "on the club" in an anxiety state. The weedy little fellow with bow legs, who does his job while he is away with a cheery smile and a penetrating whistle, is really in a much better position.

For a while we cherished the delusion that if children were brought up free of Victorian prudery about sex, the marriages of the future would be all crowned with success. To-day we realise that although ignorance, or poverty, or anything else may be a factor, the crux of the matter is the nature of the people involved, and this depends much less on whether they were breast or bottle fed, whether they walked early or late or cut their teeth in the right order, than on the kind of home they lived in as children.

The problem to-day seems to be to discover exactly what are the factors contributing towards a good home, and what influence they exert upon growing children. Retrospective studies of even physical health are extremely difficult to make with accuracy. Memories are unreliable, and unless records are unusually accurate and detailed, significant links in the chain of evidence are always missing. When retrospective enquiries are made regarding something so personal and charged with human emotions as the growth of small children, memories become even more distorted. Longitudinal surveys following a group of children from infancy to maturity, have therefore been begun during the last few years in America and in this country. Notably Moore, Hindley and Falkner<sup>3</sup>, in association with Great Ormond Street Childrens' Hospital, began a pilot survey with 23 babies in 1949, and have 197 children under observation now. Fathers, as well as mothers, are interviewed in the home in this survey, but after the sixth week all observation appears to be carried on at a clinic attended only by mother and child. In 1954 the Department of Child Health in Newcastle-upon-Tyne published the result of the first year of a 1000 family survey begun in 1947.<sup>4</sup> In this survey it appears that a greater attempt is being made than in London to see the child against his home background, though mainly from the point of view of the effect of that background on physical disease. Many other surveys of a similar kind are being made, and, when these

children reach maturity, it seems that some valid deductions may be possible from the large number under observation.

It seems that the general-practitioner observer may have a special contribution to make, for few of these specialist agencies have an easy and natural entry into the homes they are investigating. Patients willingly accept routine observation of their infants as part of the service of their family doctor. Perhaps the greatest advantage the general practitioner has, however, especially in a country community, is that he sees his patients frequently about the place, and without their being under direct observation. In any form of investigation into human relationship, the personality and impact of the investigator cannot be ignored, and this is particularly true of an investigation into the growth of small children. If the co-operation of the parents in surveys is going to be maintained, interviews must be made cheerful and pleasant. This may influence the accuracy of records by stimulating the mother to dwell more on the cheerful, positive side of achievement, than on things that may be genuinely forgotten in cheerful company but loom very large in other circumstances. The mother's account of the child's progress, and her relationship with the child, are subject to marked variations and her own subjective feelings of success or frustration vary, and influence her observations and attitude. She may show yet a different side when not being interviewed at all but seen casually about the village.

A compact, semi-rural practice, centering on a village of 5,000 people, provides a good subject for a long-term study. The community is stable because it is prosperous, and has a large number of small industries, as well as mining and farming, to absorb labour. It is an almost entirely working-class area. One medical firm with its members resident in the village is almost entirely responsible for its health. The area has been served and studied from the general practice point of view for the past nine years and during the last two and a half years some 500 special visits have been made to follow up infants delivered by one of the partners. These visits have lasted from ten minutes to half an hour and have been as informal as possible. The infants have been seen at the end of the first month, the third, sixth, ninth, twelfth, fifteenth and eighteenth and thereafter every six months, and, though definite points have been assessed at each meeting, every effort has been made to avoid questioning and to produce an informal atmosphere. Mothers, fathers, and any other relations present, have been encouraged to talk on a wide range of subjects—a time consuming, but not unrewarding, process. An eye has also been kept open for these people in ordinary village life, and some interesting sidelights have been thrown upon the picture. The contented

cheerful infant, cooing delightedly at interview, and said to be "no trouble at all", was noticed red faced and screaming when left outside a shop, demonstrating its dislike of having its mother out of sight. At immunisation clinics certain children were noted as being remarkably stoical about injection, and the mother's attitude and management in times of sickness has also been noted.

This method of observation is necessarily time consuming and a large sample cannot be carried by a single observer. Bowlby has suggested that the study of small samples is probably more fruitful than large because of the nature of the material. Moor Hindley and Falkner<sup>3</sup> noted that, in changing from their pilot survey to larger numbers, situations had to be very much standardised or comparison was impossible. Freeman, Burks and Leaky attempted to scale home environment factors, but the estimation of the cultural side of the child's environment, in terms of the tastefulness of pictures and colour schemes, leaves a great deal to the personal taste and opinion of the observer. Charlotte Buhler<sup>5</sup> found only 65.8% to 83.5% of agreement in observations made by trained observers in situations that had been as far as possible standardised: one of the difficulties in observing relations between individuals being that no notes can be taken at the time, because as soon as note book and pencil are produced all natural behaviour ceases, so that situations have to be observed and, as far as possible, remembered and recorded later. The estimation of a child's real attainments at any period are difficult; for they depend not only on the child's innate capacity, but on its relations with its parents and other siblings, on their attitude to life and to the child, on its drive and energy and innumerable other factors. Of two little girls, Janet and Judy, from similar homes, Janet seemed to be in advance at two in eating, cleanliness and many achievements. It was noticed, however, that Janet was still taken out each afternoon in a large, baby pram, in which she sat very quietly under a highly decorative bonnet, with a satin eiderdown in precise position and a befrilled pillow at her back. She had little to say when spoken to and showed little interest in the world around her. Judy, on the other hand, was an entertaining little chatterbox, a really sturdy little girl, independent and interested and scorning even the assistance of a push chair.

In the present state of our knowledge, scientific estimation of environmental factors appears to be impossible, and much must be left to general observation and impression. General observation and impression must, however, be controlled by attention to such hard facts as are available. There is an inescapable impression these days, that the health and beauty of babies has increased

remarkably during the century and rickets and scurvy have disappeared since the welfare clinics shed light upon infant dietary, and distributed orange juice and cod liver oil. Hard facts are revealed by Montcreif<sup>6</sup> (1953) who pointed out that the highest take up of government cod liver oil in the United Kingdom was reached in 1948, and was then only 32.8%, and this had fallen to 27% in 1951. This confirms the impression gained from talking to mothers that few infants receive either form of vitamin. Most are reported to "throw up" the oil and to be "griped" or "curdled" by the orange juice. The improvement noted cannot, in fact, be simply related to the distribution of vitamins.

The physical side of the average child's environment has been influenced quite considerably by the teachings of the welfare clinics, and standardization of some features has been produced to a very great extent. It is rare to-day to find a mother who does not at least know that she should claim that her infant follows a fairly standard routine. The advantages of breast feeding have been preached fairly consistently during this century, and yet the fashion is undoubtedly declining. Douglas<sup>7</sup>, in a national sample, estimated that 44.3% of babies were breast fed at three months, and 31% at six; but there is a wide range of variation in different parts of the country. Spence *et al*, in their "Thousand Family Survey", found that only 35% of infants from "satisfactory" homes, and 22% from "unsatisfactory", were fully breast fed at three months, in spite of strong and concerted teaching in favour of it by the whole team. In this area, the overall figure is 22%, although consistent and convinced teaching is given at all ante-natal clinics. A few mothers confess to a positive dislike of the idea of feeding their own infant, but most profess themselves to be willing but incapable, and the idea that the milk is "weak" or may not suit the child is still very prevalent. An enormous amount of statistical support for breast feeding has been produced and all paediatricians advocate it. Illingworth<sup>8</sup> (1953) produces an impressive summary but the public, it seems, remains unconvinced. In general practice Naish<sup>9</sup> (1949) claimed that there was a smaller morbidity rate among breast fed babies—morbidity was estimated by the number of visits required—and a small series of 100 consecutive cases showed a pretty graph. An attempt to analyse a similar series of cases in this area has been less convincing; so many babies seen had had slight infections generally classified as "colds" for which it seemed that the doctor might, or might not, have been called according to the temperament of the mother. A record of visits was, in fact, far from being equivalent to a record of infections. Accepting for the moment Naish's standard, local figures appear at first glance to support her findings, for the number of visits for infectious illnesses

to babies who had been breast fed for three months, averaged 1.4 in the first year, and for bottle fed babies 2.3. Those who had been breast fed for one month, however, upset the graph by requiring 2.6 visits each. Further, 20% of the bottle fed babies required no visits at all, and only 16.6% of the breast fed infants. It is interesting to note that Spence *et al.* claim a statistically significant correlation between breast feeding and maternal capacity. If a larger percentage of infants with incapable mothers are likely to be bottle fed, it is possible that some increases in infections and impoverished health, if they exist, may be due to the mothers' general incapacity, rather than to artificial feeds. A really flourishing, successfully breast-fed baby is undoubtedly recognisable by his radiance among a crowd of babies, as being the most fortunate of all, but one doubts at times whether struggles to maintain unsatisfactory breast feeding are justified. So many beautiful babies are reared successfully on bottles these days, that it is useless to present to the public horrifying figures of the deaths or morbidity of the bottle fed. A more useful propaganda line, in this examination ridden age, might well be based on the suggestion by Fritz<sup>10</sup>, based on the work of Maures, Tsai, Hiefen and Hardy, that breast feeding provides a high Vitamin B content in the early months, which is essential for the full development of hereditary factors, and that the highest intellectual development cannot be present with artificial feeding !

It is, however, usually after the introduction of mixed feeding that the diet breaks down. It seems incredible to those who have some idea of food values that mothers advised to thicken feeds by the addition of cereals should think that this implies omitting as many spoonfuls of dried milk as they add spoonfuls of cereal, and yet this is commonly done. Once a child can munch a soft rusk he is allowed to fill himself with carbohydrate between meals to such an extent that a full bottle is never taken, and rusks, in general practice, seem to mean the soft biscuity type, quite unrelated to the dietitians' concept of a good, crisp, jaw exercising mouthful. The average toddler has not a very large appetite, and milk is frequently dropped from the diet as soon as the child shows signs of eating food similar to that of the rest of the family. Anyone who has actually tried feeding, as well as prescribing for children, knows that it requires a good deal of skill and ingenuity to get anything like the approved pint of milk a day into the average toddler, even if no other form of fluid is given. When, as happens in the majority of homes, the child acquires an early taste for tea, the likelihood of his taking a full pint of milk is extremely remote. At this stage, because the child eats normal and familiar family food, advice on diet is not readily accepted. Only the most anxious and conscientious mothers visit the welfare clinics, and their visits, it seems, are of

doubtful value, for these mothers are alarmed by the slowness of gain, or even an occasional slight loss, when some minor disturbance has been present, or back teeth cut. Food forcing by the anxious mother frequently results, and plants the seeds of a neurotic lack of appetite in many a child who might quite well have escaped but for the monthly ritual of weighing.

No evening paper or weekly journal can be read these days without underlining how large, in the popular imagination, looms the subject of constipation. Years ago, as a young doctor, one hoped and believed that the era of the weekly purge was over, and that a more rational understanding of physiological functions would prevail. To-day enquiry reveals only too clearly that periodic purges still dominate most childhoods, while milk of magnesia is an almost routine ingredient of every baby's first bottle every day. Teething powders are given frequently and by a very large proportion of the population, and an immense pride is taken in their "scalding" qualities in most cases. Syrup of Figs finds almost universal favour in later childhood. It is only in the later years of life, presumably, that a wide choice of laxative is exercised among the many brands offering radiant health in place of dirty colons. Could the welfare clinics but disseminate some clear teaching on this subject, they would rid the world of a great deal of adult ill-health and anxiety, and release a sizeable portion of the national income into more profitable channels of expenditure.

In the matter of habit training, there is to-day no united voice among the teachers, although the majority veer away from the rigidity of the previous decade. Most good mothers worry a good deal about this form of cleanliness. A few years ago, they could at least feel they were on the right track as long as they clamped their infant, however reluctant and screaming, at certain hours upon the pot, but to-day they are disturbed by doubts as to the wisdom of this course, and torn between their desire of present cleanliness and future balance of personality.

The question of fresh air is one in which the voice of the welfare clinic has penetrated only a little into society to-day. Down to a certain level it is at least accepted that one should claim that the baby sleeps outside most of the day. The number of days on which this is considered possible, and the layers of clothing on the baby, varies inversely as we descend the social scale. Most working class babies still appear to spend their early months very well wrapped up in the midst of a hot, dark kitchen. The possible dangers of overheating neonates were discussed in an annotation in the *Lancet* March 5th, 1955, and the instability of body temperature in infants is well known so that it seems reasonable to suppose

that this early over-heating may have a definite effect upon body temperature especially when it is associated with impaired sweat secretion resulting from malnutrition (Kahn & Walker)<sup>11</sup>.

If the voice of the clinic has penetrated only so far on the subject of fresh air, it has been positively muffled on the subject of dummies. In the Thousand Family Survey, 25% of the best families, and 81% of the worst, used dummies. The authors sadly and helplessly remark that "despite the disapproval of the doctor, dentist and health visitor the use of the dummy as a solace to infants remains a common practice" and also that "strenuous efforts at preventing its use are probably not justified". In a series of 100 cases of mostly working class type in this area, 42% were found to use a dummy by the third month, and a considerable proportion of those who looked askance at dummies used "dinky feeders" to give orange juice and gripe water on exactly the same occasions as the less well instructed used dummies. The strength and persistence of the dummy habit is well illustrated by the mother who was eagerly awaiting the second birthday of her fourth child in order to stop the habit, for, she explained, even the youngest could then learn to do without, and she would have none in the house. Until that day she could make no progress, for if she put the two little ones to bed with dummies, she found that by the time she went to bed, the six year old girl, and a great strapping eight year old boy had pinched them out of the babies' mouths, and this the mother seemed to regard as very natural and understandable!

The teaching of welfare clinics has been mainly concerned with the physical side of environment, and it may be for that reason that their influence after the first year is small. It may also be true that advice is very much less readily accepted after that date than before. A small baby is a terrifyingly helpless object to many people, a fractious babe an appalling problem, and they are ready and eager to seek advice. After the first year or so the infant has become a child, the unfamiliarity and fear have disappeared, and the parents feel they now know where they are, and that they can cope without any interference from an outsider.

### **Father—Mother Relationship**

Since Bowlby's report, we have become familiar with the idea that the mother-child relationship is important, but there are also many other important factors in the home background. Tragedies caused by broken homes affecting children's development are well known, but the presence and importance of the father and his positive contribution are less frequently considered. A really successful family group seems to rest as much on a sound father-mother relationship, as on the mother-child, since the one depends

upon the other. More study might well be directed to the place of the father in the family, as his important role has tended for some years to have been almost overlooked. There is a type of elderly working-class father who discusses the rearing of children with his mates at work, much as he discusses the breeding of his pigeons, and is often a menace to family health by producing harsh, almost cruel edicts on the right treatment of minor ailments or behaviour problems. The professional type of father whose heavy and responsible work leaves him little time for family life, fails to exert the influence he might on his home in early years, and sometimes fails to take his normal part in the development of his children in later years. The young working-class husband of to-day appears to be co-operative and as eager as his wife to help with the children. Frequently a young father "on afternoons" spends all the morning wheeling his infant out in his pram, and he seems to expect to spend the greater part of his evenings playing with him when working during the day. All too frequently, however, his interest in the child receives a distinct set back when it ceases to be a passive or co-operative plaything, and becomes an individual in its own right.

The co-operation of the father does not necessarily provide an ideal background. Often it seems that both the father's and the mother's attitude is marred in the same spirit of competition with their neighbours that we foster so assiduously in our schools. Shamelessly, year after year, we induce children to compete with each other for prizes, places or promotion and they learn that they must draw equal with their group, if they learn nothing else. Thus it is that, month by month, as mothers take their baby to the clinic, they anxiously compare its progress and attainments with those of the other babies. Young mothers will frequently say how "ashamed" they felt when their infant failed to gain and all the others were "drawing ahead" and, if things reach the stage that the infant fails to sit up when the rest of his age group is crawling, then "his father" is usually "disgusted" (a curious and significant use of adjectives!) Although the only child is out of favour these days, it is rare to find a couple who marry feeling that they really do desire to make a good home in which to raise a satisfactory family group of children. When this does occur, the family flourishes exceedingly; father-mother relationships are right, the mother receives adequate support and can establish a good mother-child relationship, and affection is not conditional.

### **Discipline in the Home**

Real warmth in the home atmosphere is handicapped in some of the best homes in this country by national temperament and past teachings. We are still too much dominated by the ideas and ideals

of Truby King to follow the ideas of Bowlby to their logical conclusion. It is interesting to consider how much warmer a family environment the working class baby enjoys in this country, compared with an infant in a better class home. The one lives in the centre of the kitchen, which is the centre of family life, and is rarely left alone; it is unusual for him to be put to bed before father returns from work, and in nine cases out of ten he doesn't go to bed until mother and father retire, but spends the interval from the 6 p.m. to 10 p.m. feeds, being nursed and played with, handed round the family circle as they sit watching television, or exchanging the day's news. If mother is ill, or expecting another infant, father frequently takes a week off work and looks after the family. In the better class home, 6 p.m. is a sacred hour at which the infants must be placed in their cots upstairs, after a day spent lying in the garden contemplating the trees, with a brief play time after tea. Father rarely sees his infant, for his hours are long and his work responsible: he expects to be free to spend his evenings in cultural pursuits beyond the scope of the young. If mother is ill, help has to be hired or acquired in some way, as it never even occurs to the father to put his duty to his family before his duty to the community.

The time, however, during which the interest of the family centres round the child, varies in inverse proportion to their participation in family life. From two to five, the child in an educated home usually receives special treatment in diet, in possession of educational toys, in walks and games with his mother, and in an increasing companionship with his father. Parents strive to provide a child with a wide range of mildly interesting experiences, and to enlarge their horizons by introducing them to the world of books, at the same time shielding them from the more severe emotional experiences of family sorrows. The working class child in the same period is expected to be "out of hand", and receives little special treatment or attention, but participates fully in the family situations and emotions. Sir James Spence urged that the full exercise of emotions in childhood, whether in joy or grief, were beneficial to the child's development.

The amount of discipline to which children are subjected varies enormously in different kinds of home, from the super-Truby King establishment, where iron rigidity surrounds every moment, and sleep and play, waking and elimination are all regulated by the clock, to the problem family roaming about in an almost unfurnished house, standing round the table, just as they came off the streets, to eat the only prepared meal of the day. The toddlers run about and play until they drop asleep on the floor, from where the mother explains she "usually picks them up and puts them on the bed but sometimes just leaves them". Children in these

problem homes must learn to do amazingly little in the course of the day, and it is not surprising that a normal day's work usually proves too much for them when they come across it in later life. The mothers of these children do practically nothing, beds are not made, floors are not swept, babies are not washed, little food is cooked, and there is practically nothing to wash up. None of the normal occupations that make parents busy are attended to and, in most cases, father is a very irregular worker, and so is usually at hand to help with anything that really has to be done. The only comparably idle existence, is that led by children in much better class homes who are in charge of nurses, who feel domestic work is beneath their dignity and whose main occupation is to sit and watch that their charges keep themselves clean and ornamental.

Davis and Kent<sup>12</sup> report some interesting observations on the effect of the type of discipline in the home on the intellectual development of children. Children of demanding parents, who set high standards and gave small rewards, showed higher intelligence and reading ability than normal, while children from anxious homes scored less well in intelligence and were backward in reading. Those from unconcerned homes did extremely badly, and the authors felt that the kind of discipline was undoubtedly a powerful influence in intellectual development. Biesheuval<sup>13</sup> felt from observations on foster children that home environment can affect the intelligence quotient of a child by as much as 20 points. He stresses that parental solicitude and attention were more important than actual occupation or status. One discipline that most educated parents exercise over their children is that of demanding a response, a smile or sign, and later, some spoken response to any overture or remark. The working class mother will walk happily along a country lane repeating the same inanity to her infant time after time without apparently expecting any form of response at all. A large proportion of these infants greet a stranger with neither friendliness nor shyness, but with a glassy bovine stare. This may, as Illingworth<sup>14</sup> points out, be due to low intelligence in some cases, but must surely be aggravated by the lack of demand for response normally made on these infants.

The ability to use intelligence depends on character, and the work of Lowrie, Berder, Goldfarb in America, and of Bowlby in this country, in studying affectionless and psychopathic characters, has stressed the importance of a good mother-child relationship in the first three years. The mother who, in doing her work, can accept the "help" of the toddler as a regular, important and enjoyable part of the day's routine, is teaching the child the value of friendly co-operation, as well as the foundations of useful arts. In doing so she also builds up a companionship unknown to those

who play with the infant in all its waking hours, and only attempt to get on with useful work when it is asleep or removed by kindly relations. Long before he reaches the age of five, a child has absorbed his mother's attitude to food and elimination, to sleep, adventure and independence, to knocks and bruises both physical and metaphorical, to work and to his fellow men. The ability to learn from others in later life depends, according to Bowlby, upon having a friendly feeling towards the teacher, which cannot be evoked in later years, if it has not been established in infancy by the mother.

The presence of a good father, as well as mother, appears to be essential for the best development of the children in every sphere; so, equally, does the absence of a grandmother. Rarely does the mother appear to be able to take a proper grip of the situation in the presence of a grandmother, and housing problems to-day create difficult situations for the proper development of home life. Parents who have had one or two children at home or with their in-laws, invariably exclaim how much easier, better tempered and enjoyable are any subsequent children born in a home of their own. It is, of course, a quite common experience that second or subsequent children are easier and more enjoyable than the first, but the difference does seem to be even more greatly marked in the escape from grannie denomination. It is rare to see a young mother in her own house with the lost, baffled, slightly injured expression on her face, that is so frequent if the baby gives any trouble under grannie's roof. It seems that the child's security must lie in the mother, is she is present, and that the mother must be courageous enough to accept responsibility for full mental and physical development, though she may well take occasional advice.

### **Conclusion**

Advisers are walking warily to-day for various reasons. Those who preached the Truby King rigidity, have been shaken and cowed by the psychiatrists preaching its deadly after effects: those who followed the psychiatrists to the other extreme of free discipline and lack of all routine, have lost ground in the face of their fearful products. Bowlby's voice cut across endless arguments of detail and method with the revolutionary news that method and detail mattered little compared with human relationships between parent and child. Too long have we been occupied planning regimes and devising the remedies for this and that. To-day, at last, we have been jolted into paying more attention to the atmosphere than to the mechanics of the home, and into viewing the child as a growing thing that is likely to develop satisfactorily if given the right conditions. So many potentially excellent mothers are worried and robbed of the enjoyment of their children's early years by the

welter of articles, talks and instructions on what to do, and what not to do, and on the shocking effects of mistakes. Untold misery could be averted by some united positive teaching, that, if the home atmosphere is right, and the father-mother relationship good, then the children can be confidently loved and enjoyed, and will flourish in spite of all the "mistakes" heaped upon them by ignorant and foolish parents. Those who enjoy a simple Christian faith know these things already, and those who do not, must these days be instructed in the name of science, if health and soundness in family life is to be established.

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