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DR. ORISON SWETT MARDEN
EDITOR-IN-CHIEF

GEORGE RAYWOOD DEVITT, M. A.
MANAGING EDITOR

THIRTY VOLUMES

VOLUME FOUR

VALUE OF FIRST IMPRESSIONS AS THE FOUNDATION OF SUCCESS. HOW TO FORM HABITS AND HOW TO CHANGE HABITS. SELF-TRAINING AND TRAINING OF OTHERS IN THE LAWS UNDER-LYING SUCCESS

"*To learn new habits is everything, for it is to reach the substance of Life. Life is but a tissue of habits.*"
AMIEL: Journal, Dec. 30, 1850

"*The true beginning of our end.*"
SHAKESPEARE: A Midsummer Night's Dream

"*Here is everything advantageous to life.*"
IBID: The Tempest

"*Unless above himself he can*
Erect himself, how poor a thing is man!"
SAMUEL DANIEL

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VOLUME IV

THE GROWTH OF INSTINCT INTO LOVE

THERE is a provision of nature by which all young things are more or less loved and cared for. It may be the instinct of self-preservation that moves Mother Nature to such careful forethought, for without such love and care they must inevitably perish, and, of course, the race must perish with them. The importance of this instinct is so great that it is active even in the vegetable world, causing the mother-plant to cradle her baby wisely and well, and to put forth her best efforts to attain this end. In fact, the study of botany bewilders him who reflects that each plant struggles against wind, weather, and insect foe, and goes through its delicate and complex process of growth, all, apparently, that more plants like itself may live; yet no individual pleasure seems to be derived from this ceaseless striving. Many plants and many animals die after providing for successors, and all produce more abundantly than seems at all consistent with the principles of a sound economy. It is as if there were, in addition to the Darwinian struggle for life, and the struggle for the life of others noted by Drummond, a struggle for the life of the world — or perhaps it is that each creature struggles for its own life and for the multiples of its own life, not in order to serve its own happiness, for itself often suffers, but in order that it may add something to the world. It lives as if its chief object were to give to the world the best it knew, itself.

This motive, which works so unconsciously but so perfectly in the ranks of being below man, seems in man to have come somewhat to a halt. We do not provide for the well-being of our offspring with anything like the thoroughness, the perfect adaptation of the means to the end, of the plant or lower animal. The truth is, of course, that once consciousness is born, it must be developed to the level of the other faculties. Man can no longer move unthinkingly with the perfection of the unconscious or less conscious creatures. His intellect hampers him. As the sense of touch is never so keen in a seeing child as in a blind one, so our other faculties, when reinforced by the presence of a new one, seem to wait upon its development, and to pause. Some such provision as this would seem necessary for a harmonious growth. The conscious human being must learn to give consciously of himself — that is, must

learn consciously to love — before he can approach anything like the perfection of action of those lower creatures whose obedience to law is unhampered by the need of conscious recognition of it.

In many ways we have learned to do this. The history of civilization is the history of our efforts to learn more and more of these laws. Doubtless the slow growth of our recognition of the claims of the child upon us has been due to the slow growth of our knowledge of our own nature and necessities. In the main we have treated our children as well as we have treated ourselves. Nevertheless, the next step is to become more conscious of ourselves in this relation,— a step that is already being taken. All over the civilized world there is making itself evident an altogether new and more intense interest in children and their needs. Only a few years ago, any person sound enough of intellect to remain outside an asylum felt himself capable of generalizing on two subjects, the nature of women and the right way to train children. Now we have college professors and scientific experts willing to investigate before they generalize.

Therefore it would seem to be in keeping with the movement of the age for parents to examine into this love they are so sure they bear for their children, and to find out how valuable it is and how far it may be rationally improved. For it may be doubted if that is love in a human sense which is merely the survival of the animal instinct. Of course this instinct must survive and prove its divinity by its immortality; it must be the foundation for the loftier structure to come; but this animal affection, crippled as it is in a human being, and in him below the animal level, is not enough to deserve the great name of love. In the lower grades of existence, we call sensibility that which permits an oyster to close its shell on the approach of a foreign body, but no human being would be considered possessed of sensibility who had attained to only a like mental altitude. Love, to be love, must be in proportion to the rest of the nature experiencing that emotion. A fish that should abandon its eggs would not be unloving, but a hen would. That animal which obeys instinct perfectly is loving; not so the human being. In the first place, the human being never does obey instinct perfectly; the voice of consciousness is too loud, and too often overwhelms it. In the second place, even if instinct could work perfectly without the willing coöperation of consciousness, it would not be enough. A conscious being, such as the child is, needs conscious love. Its most precious possession, consciousness, must be consciously nourished.

The fact that much that now goes under the name of love is mere survival of animal instinct, may be inferred from a thousand and one circumstances of daily life. One sees children petted and caressed in leisure moments, scolded and thrust roughly aside in others. A baby

crying in the night is shaken and slapped; and on every excursion train, every Sunday electric car, gayly dressed children may be seen starting forth happily and returning in tears, while the tired mother scolds, the tired father threatens a whipping, and the tired passengers sulk in disgust at the disturbance. I have seen a mother dog, worn with the care of her puppies, show more patience and justice,—and more sense, for she would not have taken them for a jaunt so far beyond their strength; and she never cuffed them for whining.

Every observant person can cite cases without number in which a sensible human love would have saved children not only such discomfort as this but positive mental and bodily anguish. Nor is bodily cruelty the worst —indeed, it is probably the least—sin for which we have to answer. For children are rarely struck so hard as to cripple them, but they are often and often scolded to the crippling of their souls. In our public schools, this treatment has no other check than the native inclination of the teacher. Children are spoken to with sarcasm that withers up the very fibers of their newly opening hearts. On hot days—and our schools open so early and stay open so late that there are many hot days —the nervous strain of the teacher too often vents itself in sharp words to the sixty helpless little ones to whom she is mother for five hours a day. Do you think this is no cruelty, that it has no crippling effect upon the tender minds groping to form ideas of justice and forbearance, and finding on every side intolerance and impatience? It is, perhaps, because our own young minds were so crippled that we are so indifferent to these things.

Not long ago, on a hot, murky day, when it was an effort merely to live, one mother, whose love was a conscious incentive to right action, went to visit the school which her little boy attended. For three hours she stayed there, so uncomfortable that it required all of her self-control to endure it; and in all of that time not five minutes passed without the sound of the teacher's scolding. The lash of her tongue was constantly cracking through the heavy air, and the boys and girls never knew where it was going to strike.

"You see," explained the little boy whose mother shared his torture during those three hours, "Miss —— doesn't know when a feller tries to do right and when he doesn't, and so he gets kinder discouraged." Poor love! Five hours a day for a year under that sort of discouragement! Will not his mother need all her conscious love to offset this unconscious cruelty?

Nor is this an exceptional case. We all know that scolding is as common as daylight, and that the cry of a little child on the public street attracts almost no attention unless it be very piercing. We scold our children ourselves, the very best of us, and try to make it up with a hug.

And because we like to press the dear, little, warm, soft bodies to us; because the touch of the flower-like fingers is welcome upon our cheeks; because our lips crave to touch those perfumed ones, so far fresher than the freshest maiden's — we say we love, and that our love has made up for our momentary injustice. Made up! Why? Because in return for our cruelty we have asked for kindness, for love's delights? Do we kiss our children at once when they have been disagreeable to us? Do we kiss and make up with our friends when they have been unjust, without waiting for an apology? If we do, we think ourselves, not our friends, very magnanimous.

It is no sign of love at all to want to kiss a child. It is no more than to want to smell a rose or to listen to beautiful music. It is just a delight, that is all, and we can be as selfish and inconsiderate in claiming this delight as in claiming any other. Yet this impulse is so often mistaken for love! There was a young mother once who shook her baby awake when it fell asleep in her lap; shook it tenderly awake, that it might play with her.

Ah! When the little bundle of humanity is put first into the mother's arms, is there one — from the highest to the humblest — who does not feel a rush of mighty tenderness, an overwhelming awe fall upon her spirit, well-nigh blinding and crushing it? But presently, after the still, white month, as Marion Harland calls it, there is the old routine to be attended to, the three meals a day, the everlasting cleaning and mending, the gossipy chats with neighbors, the baby's own physical necessities —and this heaven of motherhood into which a glimpse was had is closed, and the every-day world fills the view. Almost the only mothers who say warmly that the rapture of motherhood outweighs its cares are the mothers of dead babies.

Fathers, too, after the first pride, how surprised and indignant they are that this little intruder dares to interrupt their night's sleep, to make confusion at the dinner-table, and to absorb so much of the wife's time! If, when the babies are little, their beauty and charm outweigh their inconvenience, how rarely do fathers remember to be tender—or, better yet, just—to the growing, awkward boy! Perhaps it is like hazing at college, kept up because the boy who has been hazed wants to haze some other fellow in his turn; so these fathers, who have themselves been treated none too gently during the hobbledehoy period, take it out on their defenseless sons.

Is it love that brings children into the world without wishing to — accidentally? that conjures young spirits from the vasty deep of oblivion, compels them to wear a more or less imperfect body, and to submit to more or less inadequate and irksome discipline? Is it love that dresses children not with regard to their comfort and well-being, but to

one's own pride before the neighbors? that feeds them either a limited diet to suit one's convenience and one's half-looked-into dietetic ideas, or else everything cried for, to ease one's ears? Is it love that sends children to school with a sigh of relief, that never goes with them to investigate their treatment and to unify the work of the home and the school? Is it love that disciplines children to obey because of fear of punishment; to obey, not because one is worthy to be obeyed and one's commands always reasonable, but because the child is unfortunate enough to have one for a mother? Is it love that shows off domestic discipline before strangers, justifying oneself at the expense of the shrinking child? Is it love that aims to make the child first as little inconvenient as possible, and secondly, as good as is consistent with this aim? Is it love that recognizes punishment as the only means of preventing sin, that refuses to give serious thought to the best method of punishment, but rings the changes day after day on whippings, and puttings to bed, and the withholding of pleasures? Is it love, in short, that undertakes to rear an immortal soul without attempting any special preparation for the task? Is it love that is at once so sure of itself and so unaware of its own shortcomings?

It is not the nature of love to be unaware of its shortcomings, especially when those shortcomings hurt the object beloved; this is the nature of selfishness, which delights to disguise itself as love. And in the love of parents there is this special temptation to selfishness, that the children are but another and a multiplied self, a self whom it is right to love, and from whom it is right to exact return. All the hideousness of self-love is transformed to beauty when a child is the self to be loved; and so one never suspects that the love of the original parent self may mingle with and pervert that other true love. One is not looking for the evil and it it grows and passes for a virtue.

If nowhere else in the world there were plain evidences of an immortal Being whose love is desirous that righteousness and blessedness should come upon his children, it might be seen here in the exquisite design by which men and women when they become parents are lured out of selfishness by such easy and gracious ways. It is a joy to love the little ones intrusted to our care, a joy before which the joy of self-love pales. We are wooed along the upward path by the tenderest beguilements, and our path is strewn with flowers of the most delicious beauty — flowers of gentleness and praise, and trust, and devotion — strewn by tiny hands whose preciousness adds to these already precious gifts. We suffer ourselves to be led along, with many groans and sighs, and taking great credit to ourselves; we are led along dolefully because we move in darkness. We feel the upward trend of the path; we smell the flowers we crush under foot; we guess that the little hands we clasp are angel

hands held out for our deliverance, but we do not see it with our eyes; we are not sure.

This because we have not come to know, as Swedenborg has so magnificently told us, that Love and Wisdom are one, and that love is not love without wisdom. When our love is wise love it will never cripple nor injure; it will never wound where it meant to heal; it will never fail to uplift. Those mothers who mourn errant sons and daughters were loving, — often blindly loving and indulgent, — but will one of them say that the tragedy which has blighted her life might not have been averted if she had been as wise as loving? Although it seems to us impossible that these dainty creatures whom we cherish should ever become anything else than the sweetest and noblest of men and women, dare we hope it if we give them no better training and no better inheritance than that which has left us, and all around us, the half-grown, half-beautiful, maimed, and insufficient creatures which we perceive ourselves to be? We cannot improve upon the warmth of love which surrounded our own childhood; we can only make it wiser, and so brighter — a joy, not a burden, a light shining for ourselves and for others.

Neither are we merely to pray for this wisdom — we are to work for it. As Emerson says, we can then "see prayer in all action"; in the act of studying child-nature and our own nature, and their common relation to the divine nature; in the act of learning to look and listen, not being too sure that we already have looked and listened enough. To us, in this attitude, comes the sure answer of prayer, that love and wisdom which is waiting for our readiness, and which, like the air which always rushes to fill a vacuum, is sure to fill an open and willing mind.

CONFLICTING DUTIES

For all the increase in the number of divorces obtained during the last quarter of a century, which our statisticians show us, so discouragingly, the unwearied optimist may be permitted to hope that the ideal of marital happiness has also grown. He may even go so far as to feel that the increase in divorces itself proves his position, for if, as one writer would have us believe, discontent is a virtue, the necessary forerunner of better things, there is no ground for discouragement in the fact that so many people exercise this virtue in regard to matrimony. Once upon a time a wife would put up with almost anything rather than part with that husband who was her only shield and buckler, however battered, against the gibing outside world. Now that this outside world has ceased to be so unkind to her she is no longer loath to go forth. As she is becoming more and more able to support herself if put to it, it

takes less and less to put her to it. Once she would have endured privately, every horror, rather than dare the public horror of the divorce court. Now the prospect of a comparatively free world beyond this passage of fire makes her dare. Men, too, are more ready to break home ties and to form other legitimate ones — which, as far as it goes, is an improvement upon those ties which used to be even more usual than now. The threat that he will go elsewhere, he has held over the head of his timorous wife for centuries, and she is just awakening to the fact that if he does go, she is offered an admirable opportunity to escape from his often unpleasant companionship.

Our optimist in taking this view would, of course, lay himself open to the severe strictures of the moralist, but his reply might be that he did not intend to encourage facility of divorce, but simply to draw a hopeful moral from a rather forbidding array of facts. It is evident, he might insist, that an ideal is likely to make the failure to achieve it intolerable in proportion to the vividness with which it is held. To the South Sea Islander the drum and whistle are glorious instruments, and sufficient, but a music-lover of to-day, and of America, needs a mighty orchestra, and would be restive, indeed, if restricted to South Sea Island music. So the man and woman of to-day, with increasingly complex natures, increasingly vivid perceptions of the conditions necessary to a right development, are increasingly discontented when they fail to achieve these conditions.

It is not so long since the ideal of conjugal companionship was that the wife should cook the food, clean the house, take care of the children, and not interfere with the man, — comfort him, of course, when in trouble, devote herself to him should he be sick, but on no account advise him against his wish. In poetry, she has been called his guardian angel, and her advice has been supposed to be efficacious to keep him in the paths of virtue; but in real life this course has seldom proved practicable; and even when practicable not productive of the highest felicity. There is nothing which the average man resents more fiercely than that wifely attitude which he names "setting herself up." Probably the conscientious effort of good women to live up to the guardian-angel ideal has been an agent in producing a large proportion of that regrettable list of divorces.

It is difficult always to define an ideal, which is too heavenly a visitant to be easily caged in words, but it is especially difficult to define it when in process of formation. Hints of it, language which, as Matthew Arnold puts it, is thrown out at an ideal too large to be grasped, are all that can be hoped for, and its shadowy form must be seen with the eye of

faith — which is the eye of inner experience — or it means nothing. The new ideal is the ideal of companionship in the marriage bond, of differences and similarities constantly interchanging and preventing monotony, as concord and discord mingle to make the large music of a symphony; melody has no discord, and the primitive ideal of wedded bliss was melodic; the old poets gave us either a perfect woman with a nondescript man as a supporting accompaniment, or an heroic man with a vaguely lovely woman as an *obligato*. To-day we are getting at some conception of what magnificent music may be made when human lives interchange their differences as well as their likenesses.

It was some such conception as this that led the daughter of a wealthy Chicagoan to enter the Art Institute during the days of her engagement, to learn to draw, that she might illustrate her husband's work. He was a lecturer on biology. Instead of spending their courtship in emotional inanities they spent it in scientific experimenting; and biology is not dry to them; it is truly the science of life. A great work on the brain, by a great specialist, is illustrated by his American wife, who made the dissections and the drawings in a manner as admirable as that of his own work. Mrs. John Stuart Mill inspired her husband to his noblest efforts, as witness this public tribute in the dedication of his great work on "Liberty": —

"To the beloved and deplored memory of her who was the inspirer, and in part the author, of all that is best in my writings, — the friend and wife whose exalted sense of truth and right was my strongest incitement, and whose approbation my chief reward, — I dedicate this volume. Like all that I have written for many years, it belongs as much to her as to me; . . . were I but capable of interpreting to the world one-half the great thoughts and noble feelings which are buried in her grave, I should be the medium of a greater benefit to it than is ever likely to arise from anything that I can write, unprompted and unassisted by her all but unrivaled wisdom."

Of twin birth with this ideal is that of the new motherhood; yet twins as they are, they sometimes struggle for supremacy, and rare is the woman who is just to both. The kindergarten has been showing us during these many years what an ideal mother should be. No longer do we think her admirable who spends hours upon the baby's frocks and but minutes on his mind. No longer is the food question first and the moral one second. No longer is her physical duty done when she bears him and clothes and feeds him. Even as to his body, she must study his food and his clothes, give intelligent oversight to his hours of play and of work, and watch for sanitary dangers with a scientific eye.

As to his mind, she is beginning to discover that the public schools do not lift from her all burden of responsibility. She is beginning to

know that she is responsible for the schools, and that if they cripple her child's intellectual growth, she is as much to blame as if she had crippled him with her own hand. She is beginning to find that an hour in Sunday School on Sunday, in the care of untrained teachers, and a little prayer at night, with a spanking for all unpleasant actions, from a sin to an awkwardness, is not all that is expected from her in the way of moral and spiritual training. She is even showing faint signs of a lack of confidence in the old-fashioned "good-talking-to" as a sovereign remedy for all ills, though, if the humorists are to be believed, this faith will depart from her last of all. She is growing into a perception of the truth so beautifully voiced by Mrs. Stetson: —

> "That the new children of the newer day
> Need more than any single heart can give,
> More than is known to any single mind,
> More than is found in any single house,
> And need it from the day they see the light."

But, alas for poor human nature! How is one woman to hold both these great ideals, — to hold them under her heart, and fill them with the best of herself, transforming her very selfhood into unselfishness; and finally to bring them forth to life, to be forces in action?

There is not such a thing as a good wife for a bad man — paradoxically enough, a good wife is a bad one for him. Her virtue does not understand him, does not enlighten her as to the best method of dealing with him. He resents her superiority and, feeling instinctively that they ought to be equals, endeavors to draw her down to his level — which makes him guilty of one more sin. Her very excellencies are temptations to him. Her sufferings are an offense and fruitless of good results. He'll show her that sniveling or sulking won't work with him! The good wife for such a man is one who knows him, who lives on his plane, but who is, perhaps, a very little step in advance, so little that he can get even with her once in a while and so preserve his self-respect. The woman who is so unfortunate as to be united to a bad man has to be content to be a good woman, without attempting to be a good wife. She has to rid herself once and for all of the erroneous belief that she can made a good man out of a bad one. No one can but God — and even God cannot do so against the man's own wish; at any rate he never does.

Here is where the conflict of ideals comes in: A woman whose husband is not all that is to be desired is continually fearing lest she may be responsible for some of his shortcomings; and in her anxiety, she often pays too little attention to the children, for whose shortcomings she is responsible. The woman whose husband is irreproachable often has the same problem to solve, for, alive to the new ideal of wifehood she wants

to be a true companion, to keep abreast of him intellectually, never to let him feel that she is lacking in response to his most searching demands. It is next to impossible to accomplish this and to accomplish an equally complete motherhood. Which shall she do?

If she gives herself too completely to the children how many delightful hours of companionship must John be compelled to forego! The club looms upon her imagination as an enemy to the home. He is working hard; who is to rest and cheer him, to keep him from sinking into a mere man of business? He is a professional man, a reformer, an artist, an enthusiast; who is to spur his failing courage, who to keep alive his faith in human nature — his faith in divine nature? In the struggle with the world it is too likely to be lost; she who promised at the altar to love and honor him must keep him worthy of honor. This is her ideal, — noble, but impossible.

That man or that woman who, being a parent, shirks the responsibilities involved, is not worthy of honor, and no effort of another will make him so. If it be true that a mother's duty does not stop with bringing the child into the world, then neither does a father's stop with providing the necessary money for his maintenance, and the woman who confirms her husband in the belief that it does, thereby helps to limit him. While it is not her duty to reform him, it is manifestly right that her deeper maternal instinct should arouse his more latent paternal feeling. Far from sacrificing the children to him, she should encourage him to join her in her life with them. He is not generally unwilling; with a little tact, and, most of all, with a quiet devotion to duty as an example, the average man may become a very good father, greatly to his advantage and that of the children. If, however, years of selfish living, the low ideal of fatherhood which obtains with his sex, makes him an indifferent parent, what is the conscientious wife to do?

She is to be as good a mother as she can be without his help. What? Are the children whom he has called into the world, that she has consented to bear, to go half cared for because of the arrested development of their father? If this wrong has been done them, that, with both parents living they are half orphaned, shall she add to it complete orphanage by taking away their mother? She is not responsible for her husband's inadequacy, except in so far as she encourages and pets it and covers it over, — in so far as she joins in it herself, — but she is responsible for the children's. Her duty it is, if her husband fails, to

make it up to them by being, as nearly as she can, both father and mother.

Her husband is an adult human being, her helpmeet and equal, not her charge. His destinies are in his own hands, and she cannot take them from him if she would. He must make or mar himself. Her duty ends when she has seen to it that she does not leave him neglected because of self-indulgence or indifference, but only in order to attend to other duties which he ought to share, and which, if he neglects them, devolve the more heavily upon her. The children are in her hands a sacred trust. They are helpless, he is not. She can make or mar them, if not him. There are several of them, one of him. They mean the future of the race, he the present, rapidly lapsing into the past. She is responsible for their very existence; she is not responsible for his. If any woman has to choose where to place the weight of her devotion, on husband or children, in the name of all that is just and wise let her give it to the children.

In the name of all that is wise, because it is the best thing that she can do for her husband's own sake. What will be his future if his children grow up to be unsatisfactory men and women? To insure the comfort and joy of to-day, shall she run the risk of making his latter days miserable? If, when old age comes upon him, he has a hearth full of young, smiling companions of whom he is as proud as if he had done it all himself, will he not bless and love her who sits a queen among them? And if her steadfast devotion to duty should awaken in him in his earlier manhood some vision of what true fatherhood means, for what a heavenly blessing may he not thank her!

Fatherhood! The name is almost unknown except as it is applied to the Divine Being, yet in it is the key to a knowledge of that being. Human fatherhood is its image on earth, together with motherhood. That child who knows not its meaning gropes longer for the near love of God. That man who knows it in its depths knows God, and if by his side is a woman who shares that most beautiful knowledge through her rich motherhood, blessed is their union — a marriage indeed.

PREPARATION FOR MOTHERHOOD

ALTHOUGH most of us do not begin to prepare for motherhood until we are already mothers, the importance of some sort of preparation is nevertheless recognized. We see it almost too late, and with useless regret look back at the wasted years of young girlhood and womanhood. Nor would the regret be altogether useless if it led us to see to it that our daughters, when their blossoming-time came, were prepared to

fulfill the promise of all their glory and bear good and wholesome fruit. But, although mother's classes and clubs and congresses are springing into active being about us, the young girl is a most unusual member; if she is present at all, she is sure to be a kindergartner, or, occasionally, a trained nurse. Grandmothers are much more active in mother's organizations than are young women. By long and deep-searching experience they have discovered the need of some serious study of the problems of motherhood, and they join with the mothers themselves in the effort to make their studies at once popular and profitable.

Such belated activities have their disadvantages, but they have their advantages, too. The young childless woman, if she is not surrounded with children while she is studying, and thereby has her theories continually corrected and modified by practice, is only too likely to form a beautiful, logical system of child-training of her own, to which later, some unfortunate little being must conform, or be hurt in the struggle. We all know how a perfect System — with a capital S — worked to the undoing of poor Richard Feveril,* and how it was only when strong Dame Nature took him in hand, most unmorally, and rescued him from his father's determined moralities, that he got a chance for his life — could really begin to be a moral being, master, to some small degree, of his painful destinies. But the mother who, with her own children tugging at her skirts, and perforce preventing the crystallization of premature theories, undertakes to get what help she can in the rearing of those same children, is in much less danger of such mistaken convictions. Though the children are quite unaware of the fact, they are themselves the best teachers of the science of motherhood; and when lesser teachers make mistakes and begin to inculcate errors, they erase them promptly and effectively. The only safe way to study education is in the very presence of the children.

The results of such study and observation, are, of course, as numerous and varied as the women who undertake the task, but one result is always reached — a reëxamination of existing methods. Mothers no longer are perfectly sure that children must look without touching, must be seen but not heard. They doubt the ancient conviction that bread and milk is a sufficient food, and, above all, doubt the adequacy of the literal rod for all purposes of intellectual and moral development. Women who are enough awake to begin to study about their children, have lost the immeasurable self-satisfaction which argues that the methods which were

*"The Ordeal of Richard Feveril," by George Meredith.

sufficient to develop the all-perfect Me — my mother's methods, in short —are sufficient for all future generations. And certainly those grandmothers who so often make the backbone of women's clubs do the race a great service when they proclaim, as they loudly do, that they wish they had their lives to live over again, in the light of the knowledge gained from experience, and from association. The grandmother who tells her daughter that she isn't at all satisfied with the way she brought her up, and that what good results were reached were mainly in despite of her efforts, is likely to have a daughter who studies eagerly and whose children do their grandmother credit. They will, however, be brought up in a manner quite new to her. The grounds of her convictions will have been reëxamined, and what is true in them retained, but modified to suit existing conditions.

The most important preparation, then, is not to be found in books, but in nature, though, of course, so far as books interpret and make clear the laws of nature, they are of assistance. The most important preparation is good health. If children must choose between delicately-balanced nervous systems, with excellent advantages in the way of education, and a hearty, well-poised organism, with no advantages beyond those common to all mankind, they would better choose the latter; but every right-minded woman would choose for them that they should have both. The child who comes into the world a mass of naked, quivering nerves, and who is compelled to taste the joys and woes of martyrdom with the incoming of his first tooth, is not well off, no matter how dainty his clothes, or how many of the best schools and colleges wait with open arms to receive him. Yet many men and women make preparations for their children's education, who make none for their right birth.

Unerring as the laws of heredity are, yet they work so deep within the hidden recesses of our being that they often bring about unexpected results. The small woman may have large, strong sons, the large woman delicate girls. The active, generous woman may have lazy and selfish children, and the self-indulgent woman self-sacrificing and competent ones. Contradictions like these are all about us. The exceptions that prove the rule are so numerous that they almost outnumber the cases that come under it.

In reality they merely go to prove how far-reaching is the law. God does not judge from appearances. The active, generous woman is often more interiorly selfish than the self-indulgent woman. It is easy for her to be generous, and she follows the bent of her nature without thought as to its possible effect upon her children, who, by dependence upon her, fail to acquire generosity and activity themselves. They inherit her tendency to follow the bent of their minds quite regardless of consequences, and later training makes that bent a bent

toward getting, rather than toward giving. The children of the self-indulgent woman, on the contrary, are self-indulgent too, but in order to indulge themselves they have to devise ways and means, because their mother refuses to do it for them. Thus they become active and competent. Similarly, a woman who uses all of her strength on housework will bear enfeebled children, because there is, after all, just so much energy stored in the human being, and if it is used up in one direction, it cannot be used in another. Heredity is a searching and thorough thing. It brings hidden faults to light and reveals unsuspected stores of strength in the feeble.

But while we cannot change our children's ancestors at this late date, we can put ourselves in such a condition that of the warring and varied forces within us, the wholesomest and quietest ones shall have the best chance to operate. We are all creatures of a mixed race, and a most complex heredity. No one can unravel the threads that go to make up the warp and woof of our lives, and the pattern thereof only begins to appear this side of death. Ignorant as we are, and must long continue to be, of whether our children will repeat our traits or hark back to those of the vigorous grandfathers; whether they will show again the energy which sustained our mothers in the young American wilderness, and enabled them to bear a dozen children, feed them, and clothe them with the work of their own hands, or will show the effects of the exhaustion and depletion of that original energy. We are better mothers if we do not perplex ourselves too long over the problem, but set ourselves sturdily to face the conditions as they arise. In some far distant age, women may be wise enough, and men meek enough, to permit a rational choice of mates, but the time is not yet. Now we marry, for the most part, as our blind hearts lead us, and perhaps, after all, we could not do better. Certainly, our half-informed brains, incapable of properly threshing out a most intricate problem, are no better guides.

Our children inherit from us, and from all that we do and are and may be and might have been. They also inherit from their fathers and all his people and our people. There is just one thing we can change — ourselves. The rest of the problem does not concern us.

Therefore, when we know a little child is to be born, let us sleep long, quiet hours, and, on awakening, go out into the great world about us, letting it act upon a quiescent mind and heart, that the full life of the race, and of nature, may be ours. Let us, above all, not worry over possibilities we cannot fathom. For worry is a diseased action of the nervous system, and forces a channel through which all evil influences may pour in. After all, the child will inherit from its great Father, God, and will inherit the more from Him the more we keep ourselves and our little puny attempts at forecasting the future humbly and patiently in the back-

ground. "Behold the handmaid of the Lord," said Mary, and in saying it, made possible the birth of Christ.

Some women put themselves into a thoroughly unwholesome condition during pregnancy by their fear of antenatal impressions. Many are the fearsome stories told in the twilight by old wives, and withheld ostentatiously from pregnant women. If antenatal impressions have any power over the unborn child — and this is by no means scientifically proved — it is through the nervous system of the mother. Her brooding is the only danger. The strongest nerves are not altogether controlled at such time, and therefore it behooves every woman to accustom herself to sane thoughts on this subject, and to sane and wholesome activities during the nine months. Work, and enough, though not too much of it; work, to the point of natural fatigue and sound sleep, though not to the point of nervous strain; this is the best antidote for all such tricks of the nerves. It keeps the mind to its proper function, and does not give it time to flee frantically from phantoms.

Many of the semi-scientific popular treatises on motherhood work harm by their entirely unjustifiable insistence upon the importance of the mother's frame of mind, of her very surroundings, during the period of gestation. Even if their contentions were undeniable — and they are not — it would be wrong to warn women at this time against such imaginary evils. It is as if you should put a child to sleep by solemnly insisting upon the importance of his not dreaming bad dreams. Most women cannot change their surroundings materially because a new member of the household is presently to arrive; and to tell them that they ought to is only to make them worried and anxious. The truth is — as far as we know it — that nothing of the outside world reaches the unborn child except through the mother, and that it requires a tremendous shock to her nerves to make impressions reach him at all. There is no nervous connection between the child and the mother, and it is only when impressions are sufficiently strong or insistent to change the quality of the blood, which nourishes him, that they produce any effect,— all sorts of coincidences to the contrary notwithstanding. It stands to reason that a Creator, sufficiently master of the subject to have thought out this universe, would not permit his supreme creation, man, to lie so utterly at the mercy of accident as these theories assume. The fact that strikes all observers is not how little the human being can endure, but through how much sorrow, pain, and even horror, he can live, and keep his personality intact. The effort of Nature everywhere is to protect the young, and if she has so protected the adult human being that he can stand amid the most terrific storms of life and yet do his work, she will not expose him to every breath that sways the highly-wrought organism of a delicate woman while he is but a helpless embryo. The

burden of proof of such a preposterous state of things is upon the promulgators of the theory of the power and permanency of antenatal impressions; and such proof they have as yet been entirely unable to produce.

Weissman, the latest authority upon the subject of heredity, has been upsetting the cherished theories of evolutionists by denying that even strongly-marked acquired characteristics can be transmitted. How much less likelihood, then, is there of the transmission of merely fleeting impressions!

As much of the physical preparation of motherhood consists of obedience to the simple laws of health and sanity, so the intellectual preparation consists chiefly in clearing the mind of prejudices. In order to draw or paint, Ruskin says, one must regain the innocence of the eye; and in order to properly educate children, one must regain the innocence of the mind. Since we were mistaught children ourselves we have always taken for granted certain things that are not true at all: among them, that the child exists mainly by the sufferance of the adult world, and that therefore he is the best child who gives the least trouble to his elders. It would be almost truer to say that the adult exists for the sake of the child, and that that is the best adult — the most useful to the race — who gives the least trouble to children. The real truth, of course, lies between the two statements, and the duties and rights are reciprocal. It is obvious that in order to appreciate them we must clear our minds of a bias in either direction.

One great force comes to our assistance in this effort — the force of instinct. With the birth of her first child, the mother comes into possession of a hitherto unsuspected store of instincts. The girl who has not known what it was to wake from the moment her head touched the pillow until she was reluctantly roused to the duties of life by some one's vigorous shaking and calling, now finds herself sleeping on the very edge of waking, aware of the baby's every breath. Her hand drops lightly across his sleeping body and keeps watch all night, turning him when he nestles restlessly as if it were a part of the baby's own body, only wiser and stronger. She knows how to nurse him, how to hold him, how to speak in the sleepiest and most soothing tones — she whose gay young voice echoed through the whole house so little while ago, vibrant with life, anything but soothing. She distinguishes between his cries of pain, of rage, of grief, and longing. She interprets his coos, and holds long wordless communions with him, looking into his eyes, her finger held fast in his warm, delicious little fist. And all these things she has never been taught; perhaps she has never held a baby in her arms before. The slower father stands wonderingly by, helpless, but adoring. There is nothing in the world more beautiful.

But along comes Madam Wiseacre: "What, sing the baby to sleep!" cries she; "Rock him! All wrong, my dear, I assure you. You should train him to lie flat on his back, on a hair mattress, and to go to sleep by himself in a dark room. Let him cry, if he likes. It will develop his lungs." And the poor young soul martyrs herself and her baby, trying to be a progressive mother, and to get her training early.

However beautiful the primal wisdom of the race, it is not sufficient to stand against such false teaching. One has to take a course of training to become wise enough to trust instinct. For one thing, there is danger of confusing instinct with plain every-day selfishness or temper. For example, the desire to shake an obstreperous baby is so universal and so instantaneous that it looks like instinct itself. The prompt recourse to the breast or the bottle to quiet the crying child also seems instinctive, when it is merely self-indulgence — it is easier to feed him than to ascertain just what is the matter. A mother cat would know better, and would leave her kittens sprawling, blind, and helpless, but really quite comfortable, while she went off to stretch a bit. In a hundred ways the promptings of selfhood — almost instinctive in us — interfere with the unselfish instincts of motherhood. We have to learn to distinguish.

The young mother has also the traditional wisdom of the race to help her. She knows that she must not stand a heavy baby too long upon his legs, or the tender bones will bend beneath the strain. She rubs the first tooth through with a silver thimble, she bathes him every day, and takes him out of doors on every pleasant day. She shades his eyes while he is very young, and always while he sleeps. She teaches him to play "Pat-a-cake, pat-a-cake, baker's man" (the beginning of manual training), and shortens his dresses when he is six months old, that his active little legs may have room to be more active. But, alas! she also gives him catnip tea when he is a few days old, and makes him a sugar teat; or, imagining herself emancipated from tradition, buys him a blind nipple. She trots him violently, face downward, when he has the colic, and interferes with his little bowels whenever anything goes wrong. In a thousand ways she proves conclusively that tradition, also, is an unsafe guide, though yet too valuable to be altogether discarded.

The two great necessities are flexibility and sympathy. Without these, experience is of no more avail than tradition and instinct. Experienced inflexibility and lack of sympathy is the hardest and most disastrous thing on earth. We all know the competent housekeeper and church worker, who is always sure that what she does and thinks is perfectly right; and we all know that her very competence is an offense to us, and that we are unfeignedly thankful when she makes a mistake. Let us beware, lest, in the desire to emulate her accomplishments and enjoy a similar self-satisfaction, we also offend.

Many mothers, for example, think they should never acknowledge to their children that they have been mistaken, or have transgressed their own rules. They hush the child's natural remonstrance with a stern "Don't speak so to your mother! It's not your place to correct her." And they withdraw the light of their countenance from him for a considerable period thereafter. Small wonder, if he, too, soon reaches the point of rejoicing when his mother commits some blunder.

To avoid these occurrences, slight in themselves, but sad in the lack of true loving feeling which they reveal, the mother should first of all and all of the time, show the child that she is "on his side" even against herself. Nor should she show this merely by working for him, scolding while she mends, and reminding him of her self-sacrificing devotion while she cooks; but by entering into his hopes and fears, even if he has to live upon baker's bread in order to give her time to do it. Is not the life more than meat?

True sympathy goes beyond the superficial demands and inquiries with which many mothers salve their consciences. "How did you get along at school to-day?" is not a comprehensive question to put to a child. It is better than nothing, to be sure, but it is a very feeble attempt at entering the child's real life — an attempt commensurate with the courtesies which we exchange with acquaintances: "How is your family? Does your brother like his new position?" Very likely, we don't care in the least what the answer is, as our manner betrays, but we feel that courtesy demands some such show of interest. The child probably springs to answer his mother's question with eagerness and volubility, and discovers, in the midst of things, that she is not paying attention. After a certain number of such experiences he relapses into laconic replies, "Oh, I don't know," or "All right, I guess," and presently you hear the mother holding forth on the difficulty of obtaining the full confidence of a growing boy. After a few years, perhaps you shake your head over another instance of a boy of fine heredity and correct up-bringing, gone wrong; and you wonder if there is any way to escape the dangers of maternity without escaping maternity itself.

Questions the child is able to answer seldom open up the true hidden life, that life which the mother needs most of all to know. Below the threshold of consciousness ripen the motives which later lead to action, and she who would guide the action aright must have in mind these hidden things — must really be conscious for the child of things which he does not yet know, but which are in him. It takes a far-reaching sympathy to do this — a sympathy based on instinct, but transcending it; keen through tradition, but free from its shackles; wise from experience; but as flexible as youth and inexperience. Moreover, it requires more than any one woman's wisdom — more even than her wisdom supple-

mented by that of her husband, although such dual knowing is the best knowing in the world. It requires all of these things, and the wisdom of the race besides. Not the hoarded wisdom, merely, though that is good, but the daily growing wisdom that flourishes wherever two or three are gathered together in the name of high endeavor.

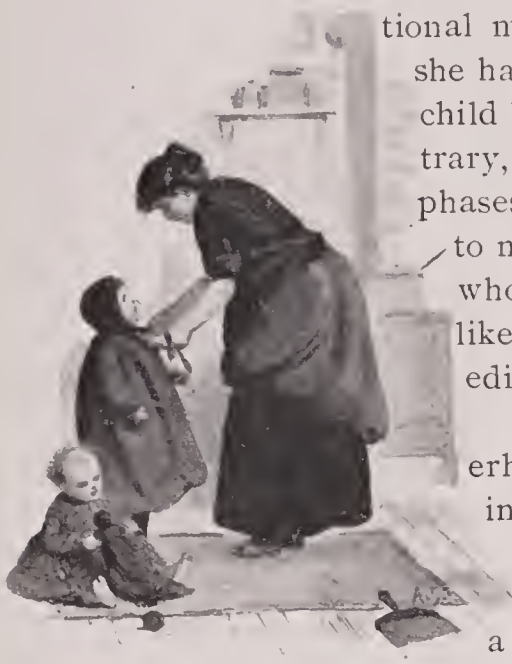
For, after all, as we have just said, your child is the child of the race; he is more a human being than he is a Jones or a Beacham. If you know him, know what moves and interests him, what develops him,— and what will fail to move him, no matter how you throw yourself into it, and tear your own spirit to shreds in the effort,— you must live the life of the race. You must join with it in its daily struggles with the problems of life, not merely look at it from your parlor window, or read about it in the evenings after the children are in bed. This great sweep of humanity past your window, these huge activities that fill the daily papers with the noise of machinery, are not foreign to you or to your nursery. It is for the sake of these things that your nursery exists, and some day Humanity will claim its age-long sacrifice, and your child will be offered up. Will he be one of the uncounted multitude, devoured and of no avail? Or will he be the King's son, so pure and bright that God himself will interfere to save him, and through him save the world? If you choose this latter fate for him, you must ask help. Not in your own might can you accomplish this great good. You must be in the world, though not of it; aware of the great movements of humanity; and sympathetic with your child, because your human sympathies are so broad that they include your child.

The race has its own wisdom, evolving from day to day — yet not its own wisdom, but a higher wisdom to which it attains step by step. You, whose child belongs to the race, must have this wisdom also, or that larger mother — the race-mother — will claim her own some day, and you will lose your child.

Your sympathies, then, must be world-sympathies. You must learn to see your child, not as your child merely, but as the child of humanity — as most of all His child who loves all humanity. When you see this, you will know that you must think, and study, and discuss. You must meet with other fathers and mothers. All the thought of the world, so far as you can get it, must be yours; and you must think out your problems, not in the isolation of the home, but in wide social circles. You need the hope of other men and women, who are struggling as you are struggling. In your dark hours you need the faith of those who walk in light. Above all, you need the broad charity which condemns no one, not even your own child, unheard.

STUDY FOR MOTHERS AND MOTHERS' CLUBS

IT is a strange thing that teachers are willing to fit themselves at such great expense of time, effort, and money for their profession, while mothers, whose work is so much more important, enter upon it in contented ignorance. A public school-teacher will take a normal course, and will constantly keep up her study of psychology and educational methods through the whole time of her service. Yet she has the children of one or two grades only, and has each child but for a very short period. The mother, on the contrary, must follow her children through all the changing phases of development, constantly advancing her methods to meet their growth. The teacher is thus like the mason who lays but one course of stone, while the mother is like the master builder who is responsible for the whole edifice and must know every step in its construction.



In teaching, and indeed in every career except motherhood, sensible women no longer believe that a natural instinct will supply the place of knowledge. We have passed the time when mothers, on being asked if they were training their daughters in domestic duties, made a virtue of replying, "It's no use to trouble them; it'll come to them if they ever need it," or, "Oh, they'll pick it up when they're ready for it." Housekeepers reared on this plan know through what labor, discouragement, and expensive mistakes, domestic knowledge comes to one; sometimes, indeed, it is never picked up at all. But while the folly of such a method of training housekeepers is apparent enough to everybody, few of us stop to think that mothers are never trained by any other method. The most important knowledge that a woman can have, that upon which depends the physical, intellectual, and moral being, not only of her own children, but of all the race to follow, is supposed to come to her without study and without effort. No wonder that all humanity constantly suffers and struggles and falls. It must continue to do so until mothers are scientifically fitted for their duties.

Meantime, the mother of the present generation must make up for her lack of training, as far as possible, by study and observation. Having once begun to study, she will begin to see that there can be no guesswork in child training any more than in cooking. A "pinch," "a little," "seasoning to taste," and similar indefinite phrases throw little light upon the latter science; and while there are women who cook very well without being able to give a precise recipe for anything they do, there is really no element of luck in their success; they preserve the propor-

tion of ingredients without knowing it, experience and acquired skill taking the place of judgment. Certainly, substances do not change their chemical action to favor individuals, and the most perfect of "natural cooks" will have from too much soda exactly the same results as have the most ignorant. Genius in cooking is a sense of proportion, and "the power of taking infinite pains." Such plain and generally accepted conditions of culinary success ought to throw light upon the requirements of motherhood, the two being so often practised at the same time by the same person.

Instinctive knowledge of any art, even the humble art of cookery, is not common, and instinctive knowledge of educational advance is entirely out of the question. In this direction, too, experience is scarcely more available. The only possible way for a woman thoroughly to learn by experience how to train children is to rear a family from babyhood up, subject it to innumerable experiments and many mistakes, and attain the necessary knowledge only when she no longer needs it. Instinct and experience thus failing her, and schools for mothers not being yet established, there is nothing for it but a careful course of home study.

But, however conscientiously she may study, no mother can learn so much by reading and working alone, as she can in association with others with whom she can compare experiences. Men have long ago found the advantages of association, and so have business women, and those who have leisure and special tastes; but there is no class or profession to which an organization where they meet others with the same interest, and exchange opinions and results, can do so much good as to mothers.

In the first place, women need a certain amount of social life. Where all the work of the house and the care of several children falls upon the mother it is difficult to secure it. Still, the woman in town or city who has absolutely no companionship with others is very rare. Walking through any neighborhood, one sees numbers of women talking on doorsteps, over the gate or the fence, looking as if they had stopped just a moment in the midst of their work for a friendly word. There is no doubt that such stolen moments help to keep overburdened women sane and cheerful, even when they are consumed in frivolous gossip. It is even possible that the work goes on better because of them. At any rate, they show the universal craving for companionship, and the equally universal practice of getting it in one form or another. The want of time, then, cannot be urged against mothers' organizations, even by the busiest of women, for it is clear that some of the moments thus spent in neighborly chat could be hoarded, and their sum devoted to a regular meeting with these friends to talk over important matters of mutual interest.

To any woman confused and harassed by the conflicting claims of housework and the anxieties of poverty, the mother's problems worked

at alone become too difficult. In her discouragement she is likely to give up thinking of them altogether. She cannot lift herself above circumstances, and finally comes to feel that she cannot lift her children, either. But give her the stimulus of a mothers' club, the opportunity to compare her situation with that of others, and so to find its bright spots and advantages, and she will be able to hold her ambitions for her little ones, and to work toward their realization.

There are many immediate practical advantages in the combination of the mothers of a neighborhood. For one thing, the children of busy mothers do not have the supervision in playtime that they need. They choose vicious companions and contract bad habits which the home influence cannot counteract. By combining it would be possible for even the busiest mothers to supervise the amusements of the little ones in turn. This would leave the other mothers free for the heavy work which is best done with the children out of the way, or to do the marketing or family shopping, or to attend the meetings of a mothers' club. The neighborhood houses which the mothers' associations of Chicago and other cities are establishing, are a still broader development of this idea of coöperation, which in its simpler forms is feasible everywhere.

Mothers' records, if kept by all the members of the club who have small children, soon become a source of absorbing interest. There is, of course, the danger that a feeling of emulation may grow out of them, and mothers be led to encourage precocity in their children through the desire to have them surpass others. This can only arise when women are ignorant of the fact that a symmetrical, normal, and gradual development is a much better evidence than is premature brightness that the child will surpass his fellows in the future. Faithfully kept records will convince mothers of this in due course of time. It is impossible to study the child, and note the eager seriousness with which he attacks the problems of life, and see how each step depends upon the last and helps to the next, without losing sight, in time, of all such petty vanities and selfish ambitions.

Even so simple a thing as setting down on paper the new words learned each day, recording the questions and remarks which reveal the workings of the busy mind, picking up and dating the funny little pictures, with the child's own explanations noted on the back, etc., will make the mother see the child's development going on at every moment and with every experience of his life, and will convince her that she must meet it and direct it.

The trouble with us all is that we will not see the importance of every influence and every experience to the future of the child. We all believe in the old warning of the "stitch in time," and know how rapidly the undarned holes and unmended rents grow, and how likely the unrepaired garment is to go to destruction at an inconvenient moment.

But we put off the correction of little faults in children, we wait a more convenient season for needed training, and do not see that our first duty is immediate and constant attention to their intellectual and moral development.

It is, therefore, a good thing that we have at last entered upon the era of mothers' clubs. It marks the recognition by mothers of their need for each other, and of the child's need for a race-mother as well as an individual mother. Since he is first of all a human being, a member of the human race, and quite secondarily our child,— since he could live without us, but not without the race,— we must ourselves call for the help of the race. We must have the best thought of the world in our task of training him for his future responsibility. And as what we get is what we give — as the law of the social world is, what we do unto others, that they also do unto us — we must give of what scraps of wisdom we have acquired ourselves, if we would receive wisdom from others. If we can give nothing else, we must give our perplexities — and our attention. We must give what we have, and then others will give back what they have, and we shall all find ourselves rich women. That is why if we belong to a mothers' club we must be active in it, without too sensitive a review of the quality of that activity. If only those took part in such gatherings who felt themselves well fitted to take part, the wisest women would remain silent — for they always know that they are not fitted. If we read a book, we must talk of it, because talking of it deepens its impression, and clears our minds at the same time that it spreads the influence of the book. In return, our neighbors will talk over their books with us, and we will thus find ourselves with the power of reading several books at once. This community of goods — this multiplication of the loaves and fishes into food for the multitude — is the work of mothers' clubs.

Fortunately, there are many books helpful to inquiring mothers who are not so situated that they can easily reach the clubs. They are of all sorts, from the complete "Mother's Guide," with its list of kindergarten gifts and its recipes for nursery cookery, to the Mother's Corner in the woman's journals. Some of them are utterly silly and sentimental,—notably those that regard the subject from a mystical and impracticable point of view, and fill pages with trivial matters,— but few of them are harmful. None of them are so to the mother who tries them on her children — provided always that the tested children are in normally good health, with active wills and minds of their own. No sick or ailing child should be experimented upon. He should be made well as quickly as possible, and every occasion for moral discipline skilfully avoided. Given well children, however, most of the books and fugitive essays upon the rearing of children will be found helpful. The

effort to think out the truth or falsity of the various doctrines advocated, will tend to waken the sleeping faculties of the mother, and she will usually find that she entirely accepts none of them, but is helped by all.

The fact of the existence of such a literature shows that women are everywhere recognizing that tradition and instinct are unsafe and insufficient guides for the training of children. Herbert Spencer could no longer say with truth that an antiquary of the future, if he examined, not, indeed, our schoolbooks, as Spencer imagines, but our general literature, would conclude that the people who wrote and read these books must have belonged to some monastic order, because in them he could find no reference whatever to the bringing up of children. On the contrary, he would find plenty of evidence that the people of the early part of the twentieth century were beginning to think about their responsibilities toward their children, though he would be amply convinced that they had not yet thought very far.

Certainly it is not necessary to have thought very far in order to begin upon the following course of study. It is not at all exhaustive, but is intended chiefly to help women who desire to inform themselves and yet scarcely know how to begin. The books are arranged progressively — the first mentioned being the lighter and more readable, the last the heavier and more thorough ones. Yet many of those put toward the first of the list, while eminently readable, are, like Miss Shinn's "Biography of a Baby," sound and thoroughly scientific. Most of us need some introduction to the phraseology of pedagogy and psychology, and these earlier books serve such a purpose. Moreover, nothing is more conducive to discouragement than a mass of information which one feels one ought to use and yet which one does not know how to use; and much of the information given by Preyer, and by other child students, is of just this character. Such investigators would tell us that they are not pretending to draw conclusions from observations which wait for completion and verification. Meanwhile, our children are growing up, and have obvious wants which must be met, and we do not really feel that we can afford to wait for confirmation of all these fine theories. On some such ground we are tempted, if we begin too soon with the study of the more advanced thinkers, to discard the subject altogether and return to familiar if not safe traditionalism. There is, however, a real service which these students of psychology can render us, if we take them in due course. They furnish us with a mass of details which we can verify for ourselves, fit into our scheme of education, and thereby help to prove it true. For mothers, like all other students, must adopt a working hypothesis and prove or disprove it by the facts met in daily life. The philosopher and psychologist, whose observation is wider than any single

mother's has here his value — he furnishes the corrective or corroborative facts.

This course of study might well be adopted by the study class of any mothers' club, but the women who adopt it should discard it the moment it ceases to meet their needs. If, for example, the interest should be greatest in child-study, let the club enter upon that kind of investigation; if the interest should be greatest in moral training, let the club take up the study of ethics; and so with any other leading interest. For interest lends a value which nothing else can lend. No logically planned succession of books can be so well planned as to properly exclude the books which the eager hunger of the mind almost predigests.

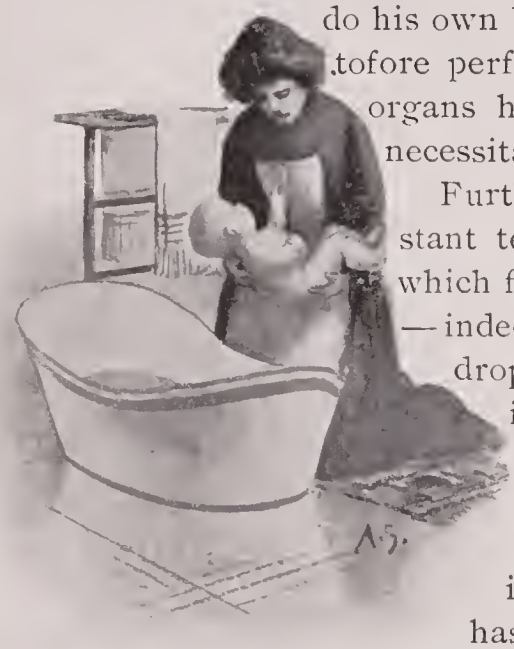
LIST OF BOOKS FOR MOTHERS

"Bits of Talk about Home Matters," Helen Hunt Jackson.
"Children's Rights," Kate Douglas Wiggin.
"Children, Their Models and Critics," Auretta R. Aldrich.
"Eve's Daughters, or Common Sense for Maid, Wife, and Mother," Marion Harland.
"Nursery Noonings," Gail Hamilton.
"The Children of the Future," Nora A. Smith.
"The Care of Children," Elizabeth R. Scovil.
"Preparation for Motherhood," Elizabeth R. Scovil.
"How to Feed Children," Louise E. Hogan.
"The Care and Feeding of Children," Dr. L. Emmett Holt.
"Finger Plays for Nursery and Kindergarten," Emilie Poulsson.
"In the Child's World," Emilie Poulsson.
"What a Young Boy Ought to Know," Rev. Sylvanus Stall.
"What a Young Man Ought to Know," Rev. Sylvanus Stall.
"What a Young Girl Ought to Know," Dr. Mary Wood-Allen.
"What a Young Woman Ought to Know," Dr. Mary Wood-Allen.
"A Song of Life," Margaret Morley.
"Life and Love," Margaret Morley.
"Household Education," Harriet Martineau.
"Religious Training of Children," Abby M. Diaz.
"A Study of Child Nature," Elizabeth Harrison.
"A Study of a Child," Louise E. Hogan.
"The Biography of a Baby," Millicent Shinn.
"Republic of Childhood," Kate Douglas Wiggin and Nora A. Smith.
Vol. I. "Froebel's Gifts."
Vol. II. "Froebel's Occupations."
Vol. III. "Kindergarten Principles and Practice."
"Education," Herbert Spencer.
"Moral Instruction of Children," Felix Adler.
"Hints for the Scientific Observation and Study of Children," Mrs. Felix Adler.
"Children's Ways," James Sully.
"Papers on Infant Development," Charles Darwin (Social Science Association, 1882).
"The First Three Years of Childhood," Bernard Perez.
"Story of the Mind," Joseph Baldwin.

«Elementary Psychology and Education,» Joseph Baldwin.
«The Infant Mind,» W. Preyer.
«The Mental Development of the Child,» W. Preyer.
«Levana,» Jean Paul Richter.
«Letters to a Mother on the Philosophy of Froebel,» Susan E. Blow.
«Froebel's Mother-Play Book,» Susan E. Blow.
Vol. I. «Mottoes and Commentaries.»
Vol. II. «Songs and Music.»
«Symbolic Education,» Susan E. Blow.
«Leonard and Gertrude,» Johann H. Pestalozzi.
«Pestalozzi, His Life and Work,» Roger De Guimpe.
«Education of Man,» Friedrich Froebel.

THE NEWBORN BABY

«THE entrance of the human being into life,» says Perez, «is as painful as his exit from it.» Not only is the labor of the birth almost as exhausting to the newborn child, with his slight powers of endurance, as to the mother, but the conditions which he meets are in violent contrast with those to which he has become accustomed. He must do his own breathing, and his own digesting — functions heretofore performed for him by the mother organism. All of his organs have to enter, as it were, upon new relationships, necessitated by these two great changes.



Furthermore, he is cold. Before birth, he lived in a constant temperature of 98.6 degrees. The warmest room which first receives him is not likely to be more than eighty — indeed, ought not to be, for the sake of the mother. A drop of eighteen degrees is a terrible drop for his utterly inexperienced, hypersensitive skin. It is no wonder he cries — and in the act sets more new forces in motion.

A newborn baby should be wrapped immediately in a large piece of thoroughly warmed flannel which has been kept toasting before the fire waiting for his advent. Unwarmed flannel is a real hardship to the child, who has not nearly enough vitality to warm it for himself. A new baby will often stop crying at once when wrapped in warm, soft folds, and laid before the fire. Of course, the flannel must be soft and fine, though it may be old. A tiny baby's skin is so thin and sensitive, it may be said to be almost raw nerves.

Even in summer, there should be some sort of fire in the room in which the baby is to be washed and dressed. It may be only an oil stove, but it should be capable of giving out enough heat to warm the

little clothes through and through. They should be hung before it, ready, for an hour before the baby is to put them on. Towels, too, of the finest old linen, should be toasting warm. Old napkins, or squares of old tablecloths make excellent towels for a new baby, and old linen handkerchiefs are none too fine and soft for washcloths.

Before being bathed, the baby should be oiled all over. Well-rendered lard or olive oil is good for this purpose. Should he have much hair, it will need especial attention. Wipe the oil off quickly with squares of old linen, ready in abundance. The object should be to perform this operation as quickly as possible, and with as little exposure of the child to the air. He should lie upon the nurse's knee close before the fire, and the whole affair should not occupy three minutes.

Then he may be dipped swiftly into the warm water of the bath, though some physicians object to this as a needless exposure. The oil perfectly cleans the child — more perfectly than water — and there is little reason for the bath beyond the desire to please the daintiness of the mother, who naturally longs to have her baby as fresh and sweet as a little flower. If the bath is given swiftly and carefully enough, there is little harm in it for a normal child, but no feeble or premature child should be obliged to undergo it until he has gained some strength.

As soon as the child has been bathed,— and if he stops crying and stretches out his little legs and seems to enjoy the warmth and the sense of accustomed moisture, he may be allowed to remain a couple of minutes,— he should be lifted out and received immediately into a toasting warm towel. I have yet to see the baby cry upon leaving the bath if, before he got his mouth puckered, he perceived the pleasant sensation of being enveloped all over in a big, warm towel. The nurse's lap should be covered, under the towel, with a piece of flannel equally large and warm. The baby should be rolled up in this, and patted and cuddled until he is dry.

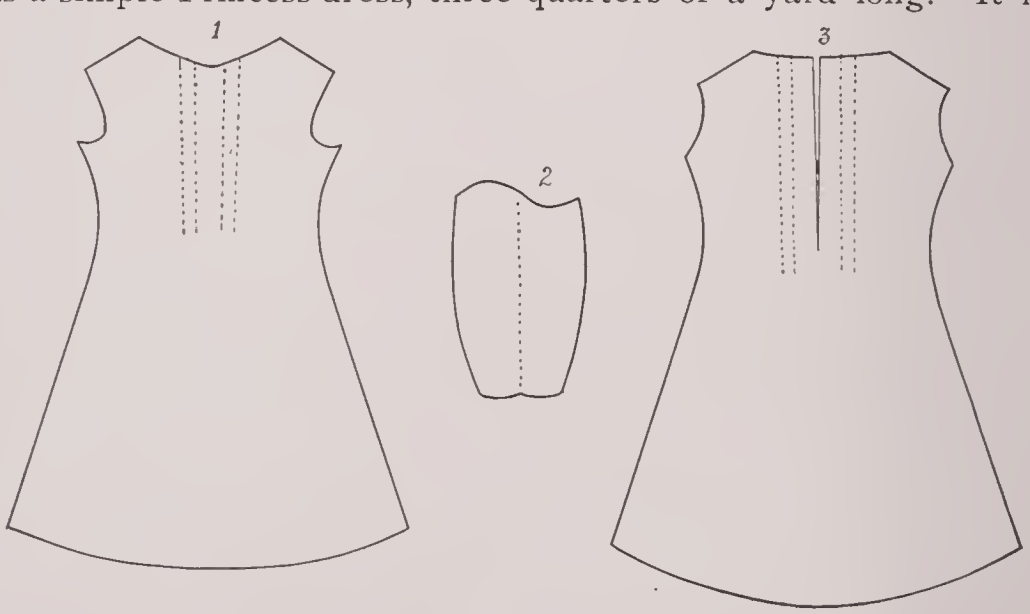
The navel-dressing — unscented vaseline and a circle of old linen with a hole in the center — should be put on without uncovering him more than necessary; the knit band — warm of course — drawn on over the feet; the diaper — warm, also, and powdered — put on next, and the band pinned to it; the little woolen stockings gathered in the hand and slipped swiftly on — all before the upper part of the body is uncovered. The shirt — which must button in the back — comes next, and usually inaugurates a season of wailing. But if it is very warm the wails will die away — unless the nurse has overlooked the fact that buttons may get uncomfortably hot, although flannel is not likely to. I have seen babies fairly burned with hot buttons. Of course, the fact of buttoning the shirt in the back will not obviate this difficulty, but it will prevent the really dangerous wrenching of the tender arms in

the effort to get them backward into the sleeves. If the shirt is bought with the buttons down the front — as the most expensive and poorest ones are sold — just put it on with the back to the front.

If each new garment as it is put on brings with it a new sensation of warmth, the baby will not cry so desperately, but its wails of discomfort will rise and fall with the changing sensations. It is hard to have to be dressed, anyway, and the premature baby is really in this respect more fortunate than the normal child — it has the comfort and warmth of cotton batting. One wonders why no equally simple and sufficient, though perhaps more durable, costume has never been invented for the sensible child who makes his *début* into this world at the appointed hour.

Next to that ideal but impossible costume, the Gertrude suit is the best thing for a baby to wear. It was invented by Dr. Lemuel Grosvenor, of Chicago, and was named after his little daughter, for whom it was designed. After her death, a bed in the children's hospital was endowed in her name, and paid for by the sale of the patterns. The suit is, as it should be, simplicity itself. I have ventured to make some changes in it, which were approved by Dr. Grosvenor, and I am sure that every mother who makes garments after this style will be grateful to the good doctor and his little child.

The Gertrude suit consists of three garments, clearly shown in the accompanying illustrations. The first is made of white stockinet flannel, and is a simple Princess dress, three-quarters of a yard long. It is de-

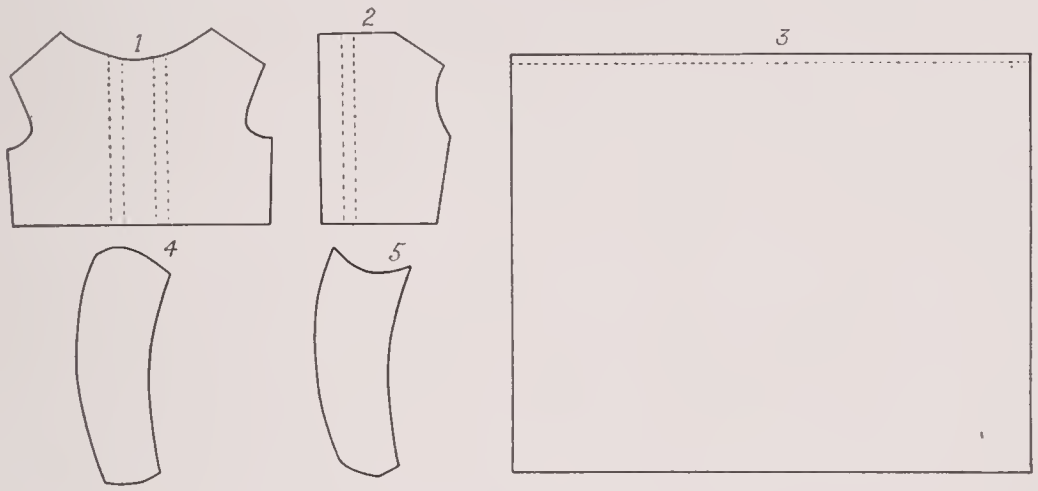


1. FRONT 2. SLEEVE 3. BACK

signed to take the place of the enticing but abominable little shirt just mentioned, and the pinning-blanket. Before cutting it out, lay a box-pleat an inch and a half wide down the middle of the front and a side-pleat, three-quarters of an inch wide, on either side of the placquet in

the back. As the baby grows, and the flannel shrinks, these pleats can be let out. In the same way the sleeves should have a tuck an inch wide. These tucks and pleats are better run in by hand, as they can then be more easily ripped. Bind the garment around the neck with seam binding and run the binding around the pleats, so that when they are ripped the garment will still be finished about the neck. The sleeves may be finished with a simple hem, but the prettier and warmer finish is made from the ribbed goods that comes for the purpose, like the finish of a regular shirt sleeve.

The next garment, which goes over this, is made in precisely the same manner, only an inch larger in every way. It is made of baby flannel.



1. FRONT OF WAIST 2. BACK OF WAIST 3. HALF OF SKIRT
4. SLEEVE 5. SLEEVE

If you want to use the pretty embroidered flannels that come ready to be made up, this second garment will have to be altered a little. Make a plain waist of the flannel, putting pleats in the front and back as before, and to this waist attach a straight, full skirt. This is the garment shown here. If you are to do your own embroidering, you might as well make it just like the other garment, only an inch larger in every way.

Over these two garments the child wears any ordinary white dress. For the first month, little slips made of pink or blue French flannel or flannelette are warmer, and less trouble to do up. They may afterward be used for nightdresses.

The advantages of this mode of dressing a baby may be briefly enumerated: First, the ease and quickness with which the child may be dressed. The three garments are slipped one inside of the other before the bath, and warmed and manipulated as one garment. The arms have to be put into the sleeves just once. The baby is turned on his back and buttoned up just once. The whole operation of dressing, including the powdering and putting on the socks, ought not to take more than five minutes.

Second: The child is perfectly free and comfortable in his clothes. There is no band binding him anywhere. After the first two weeks no child should wear a band. It increases the sensitiveness of the abdomen, by wrapping it more warmly than the rest of the body. Then it exposes this sensitive abdomen to cold, because it is so frequently wet. If it is not pinned to the diaper, it rides up, and leaves the surface exposed part of the time, and covered part of the time. If it is pinned, it gets wet.

Third: The object of hygienic clothing is to cover the body evenly, and not to restrict it anywhere. The ordinary mode of dressing a baby leaves him with two covers over the arms and neck — the shirt and thin dress — with six around the middle — the dress, two doubled bands attached to his skirts, and his shirt (seven, if he wears a body-band) — and four over his feet. The only unobjectionable thing about this method is that it covers the feet well, and this is as it should be, for a little baby's circulation is so feeble that he needs extra protection for his extremities. With the Gertrude suit the child has three even thicknesses of clothing all over, combined with perfect freedom. The extra warmth for the feet is secured by means of long, white, woolen stockings.

Fourth: The usual method of keeping children's clothes on by means of tightly-pinned bands is now beginning to be replaced very generally by skirts hung upon waists; but so long as the waists are of white cotton, as they usually are, they are not sufficiently warm, and the child must wear the unhygienic body-band, and perhaps a knit jacket to make up the necessary warmth.

As for the long stockings, they are not, of course, as attractive as the delightful little bootees with which we are all familiar. All first babies have an elaborate supply of them in all colors. But they persist in kicking them off; nor has any one ever discovered a method of making them stay on without injurious constriction, while the fat little feet rub them together by the hour. The best plan is the long, woolen stockings, which can be pinned to the diapers, and which protect the knees as well as the feet. If you have a lot of pretty socks which you must use, put them on over these stockings; they will stay on better and it is then no matter if they do come off.

If one dresses the baby after this plan, the layette may be very inexpensive, and yet perfectly comfortable and satisfactory. Here is a list which will be found sufficient. Of course more may be added to it if desired, but it can hardly be lessened and meet the wants of the baby:—

Dresses	6
Stockinet undergarments	3
Flannel skirts	3
Nightgowns (flannel, or flannelette)	3

Double gowns 2
Knit shirts, for wear at night 3
Diapers ..... 5 dozen
Long woolen stockings ..... 3 pairs
Knit shawls or flannel squares 2
Cloak, hood, mittens, veil (not white).

Two or three of these articles require explanation. The three undergarments are sufficient, because they are not worn at night, and this number permits of a change twice a week, which is often enough for ordinary purposes. In case of accident, the little garments are easily washed out, as they require no starching, and, if they are of stockinet, no ironing. They may be simply stretched into shape while damp. The little stockings are expensive, if they are of as fine and soft a quality as they should be, and three pairs are enough. They may be washed out in a few minutes, in the washbowl, if necessary. It will be noticed that there are no white skirts, and, really, the baby is much more attractive, as well as more comfortable, without them. The soft flannel permits the lovely curves of the little body to show through, and the softness and flexibility make a baby dressed in this way a delight to hold — not that they are ever very disagreeable. The white skirts also increase the laundry bill. However, a young mother, very proud of her child, might permit herself one dainty white petticoat for visiting, and an extra white dress for the same purpose.

The knit shirts spoken of for night wear are the cheap little machine-knit shirts, soft and sleazy, which go on over the head. They cost about twenty-five cents, and are far superior to the expensive little hand-made ones, finished with silk and buttoned down the front. Of course, the stockinet undergarment may very well be worn at night, but in that case the number must be doubled. The baby should never wear at night the clothes it has worn in the daytime. The shirts are cheaper, and are not so likely to get wet as the child lies in bed. A good plan is to wrap a thick napkin around the child's body, under the shirt, coming well down over the legs. This tends to hold the shirt down, and at the same time to prevent it and the nightdress from getting wet. It can easily be changed. The baby should either wear the stockings at night, or have the feet wrapped in flannel.

Although small quantities of everything else are given in this list, the number of napkins may be thought excessive. It is the one place where no one should economize. They may be made of old table napkins sewed together, two at a time, and quilted down by the machine; or of old squares of table linen, treated in the same way; or they may be of cheap, soft, sleazy cotton flannel; or of cotton diapering; or of the finest linen diapering; but they should be large and abundant. A yard square is none too large, though, of course, this size will require folding down for

little new babies. If made of the diapering, they should be a yard and a half long, doubled into a square, and then folded into a triangle.

They should be frequently changed, and washed at once. No baby should ever be compelled by a lazy mother or nurse to wear a napkin which has been worn before and merely dried. Neither should he be forced, in wet and cold discomfort, to wait her leisure before being restored to the decencies of civilization. It is really not much trouble to change a baby, wash out the napkin, and hang it to dry, if one does not permit oneself to think the task an unnecessary one, and to shirk it until there is an untidy and disagreeable pile to be attended to all at once. Nature has made babies so sweet and wholesome that it is a pity we fail to do the little that is demanded of us to keep them so.

At night, too, the child should be properly attended to. It is really a desecration to allow him to lie all night in such an uncomfortable condition — he who ought to be sweeter and daintier than any adult. It is far from easy to wake in the night two or three times to change the baby; but one soon becomes accustomed to it, and performs the operation almost without waking; the baby, too, sleeps right on, and all the more deeply because he is comfortable. There should be a pail of water, with a very little ammonia in it, beside the bed, and into this the napkins may be dropped. It is little work to rinse them out in the morning and hang them to dry. After one or two washings in this fashion, however, they need to go into the regular wash and be boiled and ironed. Careful attention to this matter at night, coupled with care that the child is thoroughly warm, and is turned over once or twice, makes a great difference with the child's sleep. It almost insures a "good" baby at night, if he is well in other ways.

Most of the chafing from which little babies suffer so frequently may be prevented by attention to these details. A chafed baby frets almost constantly — and no wonder! — and the lazy mother, in this case as in so many others, really gives herself more trouble than the conscientious mother.

After the layette has been provided, comes the fitting out of the basket. Usually, the first baby's basket is lined with pink or blue — pink, if a girl is desired, blue for a boy — and is covered with dotted muslin, and decked with flounces, laces, and ribbons. The basket for the second baby is more simply decked — the first one made over. The third gets the same basket, stripped of its trimmings, except for pockets and pincushions; and the fourth baby is lucky to have a basket at all. But even if it is only a pasteboard box, it must be fitted up with the following articles: —

A box of talcum powder.
A jar of vaseline.

A jar of lard, or a flask of olive oil.
A box of fine, pure soap.
Three papers of safety pins, medium, small, and large.
Small squares of linen (old handkerchiefs), to serve as wash cloths.
Larger squares, to serve as towels.
A large piece of old flannel, for the lap.
A bath thermometer.

But even when a baby is well provided for in all these respects, well fed, and well cared for, he still will cry occasionally. It is his only language, the only means he has of expressing the thousand strange discomforts that beset him. For the most part, we know how to meet his most obvious wants merely — the want of sleep, of food, of rest. When to us, as adults, these needs are supplied, there remain many others absolutely essential to our happiness. The baby, being an adult in the vague, has these same wants in the vague. We must not too hastily assume that he is a mere little animal, of the lower order, because, after all, within him are the possibilities of a most complex organism — all live possibilities, in a state of growth. The child needs spiritual as well as physical nourishment, and he will often cry when put in the arms of an uncongenial stranger before he has learned to know his own mother; his intuitions seem to develop before his power of intellectual recognition. It has been proved time and again that babies brought up in the best-equipped foundling asylums, drinking nothing but sterilized milk, living in surgically clean rooms, and in every scientific particular better cared for than at home, do not thrive as babies do in affectionate, ordinary little homes. A baby's crying is a complex thing, the expression of a developing complex personality.

Moreover, we have the word of so careful an observer as Preyer that in the first half year of life, unpleasant feelings are more frequent than afterward. He proceeds to enumerate the many causes which give rise to uncomfortable sensations in young children. Among them he mentions inconvenient positions in lying or being held, and of cold or wet. All these sensations together afflict the new baby who is laid, for example, upon a flat bed by himself, and left to go to sleep as he may. He is unable to turn himself, or to escape his own discomforts. He can only cry. And then the nurse solemnly assures the mother that it is her duty to disregard this feeble and entirely justifiable protest.

The directions usually run something in this wise: "Make sure that there is nothing the matter with the child; that he has been fed at the proper time, that no pins are pricking him, that the clothes are smooth under him. Then let him cry." If the baby were the simple mechanism that this implies, there might be some sense in such a

suggestion. But one thing is always true: No little new baby ever cried for the pleasure of it, or to bring about any desired result, or for any other reason than as an expression of discomfort. The state of development wherein he can reason that if he cries he will get attention, has not yet arrived.

He cries simply and solely because he feels like it, and he feels like it because something has gone wrong. What adult, reasoning from adult experience only, can guess that it is a hardship to a baby to lie flat? Yet it is. And it is also a real hardship to him to lie cold. And he will lie cold in spite of all the downy and woolen wraps that can be piled on him, if no heat other than his own be supplied him. Herbert Spencer points out that "To make up for that cooling by radiation which the body is constantly undergoing, there must be a constant oxidation of certain matters which form part of the food. And in proportion as the thermal loss is great, must the quantity of these matters required for oxidation be great. But the power of the digestive organs is limited. Hence it follows that when they have to prepare a large quantity of this material needful for maintaining the temperature, they can prepare but a small quantity of the material that goes to build up the frame. Excessive expenditure for fuel entails diminished means for other purposes; wherefore there necessarily results a body small in size or inferior in texture, or both."

The cradle, treated of more fully in another article [page 671], should be thoroughly warmed, as well as curved, and capable of swinging. The habit of being swung to sleep, is, after all, very innocent, much less harmful to a child than the habit of crying himself to sleep, or going to sleep uncomfortable and lonely. The swing of the cradle or hammock is useful in quieting the baby's nerves, when they have been overstrained by too much excitement, or by a deferring of the nap-time beyond its usual hour. And when he is restless, too, the swing of the cradle or hammock equalizes the circulation, and prevents the discomfort, familiar to adults, of trying to go to sleep when there is no such thing as a comfortable position to be had. The hammock or cradle gently tosses the little body from side to side, giving it a rhythmical massage very soothing and helpful. Personally, I prefer the hammock to the cradle, because its long swing is without jar, and one push of the hand will keep it going a long time. It is the device of a people who live near to nature, and who seem to have imitated the nests of birds as nearly as possible. If baby cannot swing in the branches of a tree, it is next best to swing over mother's bed, to the sound of her quiet singing.

What! sing the baby to sleep? Yes, indeed, and pat him, and rub his little back, if necessary, and, in general, make him as comfortable and happy as possible. As both Perez and Preyer prove that babies

have many obscure discomforts which we cannot even guess — they call them organic discomforts — let us not deny our natural impulse to give them many little foolish comforts. Much satisfaction is afforded by a gentle massage of the baby's back, by letting him kick out his legs, unencumbered by clothing, before the open fire, and by gentle and rhythmical pattings. All these things are better than walking the floor with him. There is nothing in a promenade about the room to quiet him, although the sight of a multitude of objects may distract his attention. Except in case of great pain, however, this laborious method of relieving the restless child need not be resorted to. Usually the swing of the hammock and a soft monotonous song are sufficient distractions.

Froebel makes a strong plea for the right of the child to have his own mother put him to sleep. He says that the child's last impression on falling asleep, and his first on awaking, should be of a loving voice and face. Thus will the tender emotions be developed in him, and his power of affectionate response be increased. This accords well with the modern understanding of the law of suggestion, which has made us aware that the brain, on going to sleep, is in a relaxed and impressionable condition, and that impressions received then work into the very centers of being and later produce their inevitable effect. On waking, too, the brain is similarly impressionable, only in this state its impressions tend to bear fruit in conscious acts. If we wish, then, to have our children loving and sympathetic, their last impressions on going to sleep must be of love and sympathy. If we wish them to be peaceful and contented, they must fall asleep in quiet bliss. The impulse which drives a mother to pray over her sleeping child, and to kiss him as he sleeps, is a true instinct, implanted in her heart by the Father who sees that his little ones receive what they need. It is as true to the laws of nature as the instinct that leads her to feed and cherish the body of her child.

The subject of food has been treated of elsewhere, but I wish to take up the subject enough to warn mothers against too rigidly following any rules. Children differ greatly, and so does the amount of nourishment which a child gets from his food; therefore no general law as to hours of nursing that is universally applicable can be laid down. A knowledge of the standard is valuable, in that it shows the mother to what end she should aspire; but it is harmful if it lead her to disregard the plain warnings of nature in favor of a rule made without reference to her particular child.

I know of a baby that nearly starved to death in the midst of plenty, because his mother and the trained nurse, between them, had come to the conclusion that he should only be nursed once every two hours, and then only fifteen minutes at a time. It happened that he was a very slow nurser, and he lost weight rapidly, and his mother nearly lost her milk

through not having the breasts drawn, before the family physician discovered what was the matter, and put a stop to it. Later, the baby was so regular in his habits that you could set the clock by him. He would play in his mother's presence, perfectly contented, until within five minutes of his nursing hour, when he would suddenly set up a sharp, imperious cry, and refuse to be comforted with anything but his food.

This was accomplished, not by following any set rule, but by watching the baby, discovering the laws of his own little organism, and obeying them. Children who are nursed whenever they cry become little gourmands; but children who are fed when they are hungry speedily regulate their own hours. The attentive mother can soon discover what the child wants, and if it is not his usual feeding time, she will try all sorts of other things before leaping to the conclusion that he wants food. Often, little children will cry as if for hunger, when they are simply thirsty, and a few spoonfuls of water will appease them better than any amount of warm milk.

Preyer gives a very instructive table of cries, by means of which an infant's cry of hunger may be distinguished from other cries, expressive of discomfort. He says: —

"Above all, crying is characteristic: it is piercing and persistent in pain; a whimpering in an uncomfortable position; uninterrupted and very loud in the cold bath; interrupted by frequent pauses in hunger; suddenly waxing to unexpected intensity, and again decreasing quickly, when something is desired and not obtained."

He adds, as further signs of discomfort, the shutting of the eyes and holding them tightly closed; the turning away of the head and — most delicate index of all — the form of the child's mouth. As early as the eighteenth week, he observed that his child drew down both angles of the mouth as a sign of discomfort, and Darwin noticed it in his child even earlier, from about the sixth week to the second and third month. Both Darwin and Preyer agree that a quadrangular form of the mouth, almost a square, together with violent screaming, is a sure sign of the highest degree of discomfort. It behooves the careful mother to discern as carefully as these watchful fathers the nature of the baby's cry, and not to permit him just to cry until he is through, unless she has first exhausted every means of determining and removing the cause of his discomfort.

Preyer gives some useful facts in regard to the intervals that should elapse between the feeding times of young infants. "The smaller the stomach," he says, "the oftener it becomes empty. The more it can hold, the longer will hunger be postponed, there being no lack of nourishment. In healthy, newborn infants the stomach holds (according to Beneke) only thirty-five to forty-three cubic centimeters; after two weeks, one hundred and fifty-three, to one hundred and sixty; after two

years, seven hundred and forty (leaving out great individual variations). Thus the intervals between the meals become gradually longer, and the meals less frequent, and there remains in the intervals more time for the infant to turn its attention to other things than food, since the child, the older it grows, sleeps so much the less and consumes its food so much the less rapidly. In the tenth week, to be awake and hungry three times in the night (from eight to six o'clock) is little; in the fifteenth week, the intervals between meals are prolonged in the daytime to three or four hours, against two hours at the beginning of life; in the eighteenth week — and perhaps earlier — there are nights of ten to eleven hours without the taking of any nourishment at all. Great differences exist, to be sure, among perfectly healthy infants in this respect."

Children who are usually regular in their hours of feeding, may, nevertheless, require food at shorter intervals, if they have been much fatigued, as by playing too hard, or seeing many new objects, or even, in some cases, hearing music. The mother who understands the signs of hunger will not refuse the child the food that is then demanded to supply the waste of brain and nerve cells caused by fatigue and excitement. Neither will she interpret as hunger the cry of pain, or the restless whimper caused by an uncomfortable posture.

If the instinct of the human mother were as perfect as that of the lower animals, she would doubtless understand these inarticulate sounds of her young as animals do; but the fact that her instinct is not sufficient to distinguish and interpret, makes it necessary for her to fortify it with close and careful observation and comparison with the experience of others. The value of a well-kept record is very great, for by this means she will be able to systematize her observations of her child's moods and expressions and to become a really scientific observer. As Dr. Harris well observes, " Without scientific method, one fact does much to obliterate all others by its presence. Out of sight they are out of mind. Method converts unprofitable experience, wherein nothing abides except vague and uncertain surmise, into science."

Preyer's valuable book is nothing else than such a record of one child (his own), carefully studied; and all childhood and parenthood is his debtor for the results he reached. For example, he gives us a standard by which it is easy to judge whether our children are sleeping as they should. He shows that in the first month sixteen out of the twenty-four hours were spent in sleep, though sleep rarely lasted beyond two hours at a time. In the second month, sleep lasted from three to six hours at a time; in the third and fourth, from four to six hours; in the sixth, six to eight hours; in the eighth, restless nights on account of teething; n the thirteenth, fourteen hours of sleep daily, in several separate periods. In the seventeenth, prolonged sleep began: ten hours,

without interruption. In the twentieth, prolonged sleep became habitual, and sleep in the daytime was reduced to two hours. From the thirty-seventh month on, the night's sleep lasted regularly eleven to twelve hours and sleep in the daytime was no longer required.

No child should be waked from sleep under any circumstances. Every such waking is a nervous shock, sometimes even leading to convulsions. To wake a young baby in order to show the color of his eyes, is absolutely wicked. The fact that he will soon drop off to sleep again does not mitigate the offense. He has been hurt, though he may — and probably will — overcome it. A lasting depression of spirits is said to follow such artificial breaking of the spell of sleep.

A child that, during the first year of life, sleeps well, eats well, and keeps warm, will usually grow well, and develop his physical and mental powers according to the order of nature.

THE NURSERY AND INFANT DIETETICS

THE PROPER LOCATION OF THE NURSERY

THE first step necessary in the arrangement of a nursery-room is to locate it with reference to air, light, and ventilation. Such arrangement is not uniform for all parts of a country. For example, in the city and suburbs of Chicago, and indeed for a vast territory of which Chicago is the geographical center, unless strictly local conditions forbid, the ideal house must face to the south. This is not only because the sun shines twice as many hours daily on a southern as it does on a northern exposure, but also because the winds and summer breezes are most frequently from the southwest, and the full benefit of these winds is received by the rooms looking south. In a word, the room that receives the greatest amount of sunshine and wind during the year is always the best for human occupation, and is especially the best for the nursery. The infant of the family is the last one that ought to be consigned to the corner where he will be least in the way, for he is the one that suffers most from improper surroundings. The very best spot in the house is the exact place for the infant, and that is where the nursery must be established. In Chicago the ice and snow disappear, the grass grows green, the trees bud, and the flowers bloom, two weeks earlier in front of

the houses that face south than in front of those facing north. It is perfectly safe to say that infant life will experience much the same advantage from those conditions: for the human being has a vegetative life, that is more predominant in proportion as the child is younger; it is a plant in part, and an animal in part, and with these shares in the renewing life of spring, as also in the vicissitudes of all seasons.

We therefore place the nursery where the life and vigor of nature are most luxuriant, and that is where air and sunshine are the most abundant.

VENTILATION

Having secured the advantages of proper frontage for the nursery, we have also obtained the best conditions for ventilation. Ventilation means not only plenty of air, but plenty of fresh and pure air; while at the same time it demands, what is the most difficult of all to obtain in our northern climates, air of the proper temperature. In the spring and autumn this is easily approximated; in the summer, also, except during occasional hot spells, variation may be kept within healthful limits; but during the severe months of winter our best efforts will often fail to keep the air of the house warm enough for the very young, and at the same time fresh and pure. Nevertheless, we must endeavor to approach as near as possible to this standard. We can accomplish much, even if we cannot do all that is desirable. It is well to remind ourselves that variation of temperature is quite consistent with healthful conditions; but that such variation has much greater effect upon infants and young children than upon adults. That is to say, we can allow for the adult an amount of variation that would be hurtful to babes, and consequently the control of temperature in the nursery must be more carefully managed than is necessary in other parts of the home.

TEMPERATURE

In the first place, the temperature of the nursery ought not to be decided by guessing, or by the feelings of those who occupy the room. Such a mode of determining the temperature is utterly misleading. To one just entering from out of doors, a room may feel too warm; while to one who has been in the room all day, it may seem chilly. The only sure guide is the thermometer. In any room it is possible to fix upon a point where the instrument will give the most reliable measure of temperature. This point being chosen, the thermometer, especially in winter, ought to be frequently consulted, and the heat in the room be increased or diminished accordingly. The temperature for infants during the first

year ought to be maintained not far from seventy degrees, Fahrenheit, during the day, and not lower than fifty during the night. Children who sleep with the nurse or mother, however, will not be injured by a temperature from five to twenty degrees lower than this, provided the bed clothing is sufficient to compensate for the difference. From year to year, as children grow older, the sleeping temperature is properly lower, until in adult life, several degrees below zero seems to promote, in healthy persons, both sound sleep and general vigor. We must emphasize this distinction between the temperature suited to adults and that to infant life, because the proper regulation of the nursery is the question before us.

It may be well to add here, also, that where the proper warmth of a room cannot be obtained, owing to defective heating arrangements, more abundant warm clothing, especially woolen, may be made available. A baby dressed in the Gertrude undergarments, made of the Jaeger flannel, is warmly and not too heavily clothed. The essential point to be secured is that the infant body shall be always warm. It matters less how cold the air is for respiration. Very young infants, provided their bodies are warmly clad, seem to breathe easily at quite a low temperature of the air, and are able under these conditions to take long rides out of doors during the winter, without injury, and even with manifest benefit.

In seeking to find a sufficiency of artificial heat for our purpose, we find that our methods of heating are, one and all, imperfect. Fireplaces, stoves, hot water, steam, and furnaces are the means at our disposal. The fireplace will do for moderate but not very cold weather; it warms the room only in its own neighborhood, and most of the heat escapes up the chimney; but on the other hand it is the best of all methods of ventilation.

Iron stoves, while not good, are better than a poor variety of furnace, or than steam. But even a good self-feeding, hard-coal stove has advantages. The old "Morning Glory" is the best type. Its cylindrical shape is important. No square stove is a good radiator. What the scientific reason may be it is difficult to say; but the fact is that the more modern rectangular stove will not warm a room half so thoroughly as the older pattern of cylindrical stove. The prejudices of the housekeeper against the stove, as being dusty and troublesome, are not to be considered when the nursery is under discussion.

Hot water for those who can afford an expensive plant and an engineer to manage it, is certainly worthy of some commendation. Otherwise it has serious objections. We need something that will respond quickly in emergencies, and will make that particular room just what we desire, in a few minutes.

Steam is still less controllable than hot water. It must be steam heat or nothing, and so it overheats rooms when the weather grows

warmer, and often fails to rise to the occasion when it grows cold. We rule it out of the nursery as utterly unfit, however suitable it may be elsewhere. A furnace never warms all the rooms of a house equally well; and whether it favors one side of the house or another, depends upon the wind. It displaces the raw air of our rooms with burnt air, which dries up the skin, the eyeballs, the throat, and the bronchial tubes. Its only legitimate or tolerable use is to take the chill off, leaving to other means the work of counteracting its vagaries, and antidoting its mischiefs. A moderate furnace fire and a good grate work fairly well together, but furnace heat alone is just impossible for the nursery. The day the furnace breaks loose for the winter is also the day for headaches, colds, and sore throats innumerable.

The gas-log and kindred devices of that order ought not to be wholly overlooked. It is enough to say of them that they consume more of the oxygen of the room than any other means of heating, and soon render the remaining air perceptibly lifeless and unfit for respiration. Besides all this, we must recommend for the nursery that mode of heating which comes within the means of the great majority of parents, and that is undoubtedly the stove; and among stoves and above all others, the soapstone. We have nothing quite so good and economical for this purpose as a soapstone stove; it radiates a pleasant heat and is as good as a fireplace for ventilation.

We add one more word for the stove. If it becomes too hot, you can move away from it. The same can be said for the fireplace, but not for the other modes of heating.

TO SUPPLY FRESH AIR

Whatever may be the method of warming, a constant supply of fresh air in the room is a positive necessity. There are not many ways of obtaining this. The windows are usually the means at our disposal, the doors not being suitable, except for brief occasions. And the window is a very fair instrument for the purpose. It ought to open at the top; should be so constructed that any amount of air, more or less, may be admitted and should be open all the time, night and day. It may not be open more than a quarter of an inch, or it may be open a foot, as the air and the temperature of the room may require. But only on brief occasions of extreme cold, while the room is being warmed up to the standard of seventy degrees, ought this window to be entirely closed. We know that a temperature above seventy is oppressive in proportion as it rises above that point; also, that living is not comfortable when the temperature falls much below that point. Especially is this statement true for those who cannot counteract the cold by physical exercise; therefore, for infants

and young children. We also know that prolonged heat, even that of summer, is always the cause of increased infant mortality. This is sufficient to show the importance of attention to such matters in the nursery.

It is true that we need not be concerned about moderate variations of temperature. These are probably beneficial to the young organism, by arousing its powers of reaction, and so increasing the power of endurance for the future. We do not need to be overanxious, therefore, about slight changes of this kind.

We may conclude with this general statement, that *all* artificial air is impure, or at least is changed for the worse by the process of warming. The only pure air is that found in its natural state out of doors; and even that is purer the colder it gets. The air of high altitudes and of high latitudes is always the purest.

But since children demand a certain degree of warmth in their abodes, we are compelled to provide for them air artificially warmed; and to counteract the injurious influence of this, we are again required to secure for them a constant supply of fresh air from out of doors. The rule for regulating the amount of this pure air is to admit into the room just as much as we possibly can without reducing too much the temperature of the room.

Many mothers seem to dread fresh air. They think that the child is safe so long as it is warm and shielded from outside influences. And so they batten every door and calk every window, keep the children stewing in foul air all winter long, and are then astonished that the little ones have snuffles, coughs, and sore throats and are generally puny.

This is all utterly wrong; the children must be kept not too warm, but sufficiently warm, comfortably warm, and at the same time have all the fresh air possible. When double windows are in use, the outside window can be opened at the top, and the inside one from the bottom. By opening or closing these two windows more or less, according to circumstances, the air entering the room can be very easily controlled. Thus, between the fire and the window, or other fresh-air opening, it is always possible to regulate the temperature and the ventilation of the room.

Even where the nursery is thoroughly ventilated, the child needs the full benefit of the unmodified outside air, and that from one to three or more hours daily. Nothing can so effectually undo the mischief of a heated room as a ride in the perambulator, or, for the very young, a little journey in the nurse's arms. Children who are accustomed to this, show manifest delight in it. They have better appetites, quieter sleep, calmer nerves. They are happier all through and all over. They do not fret and worry all day long and toss uneasily all night. Nothing less than an instant violent thunderstorm ought to interrupt this programme

of blessedness — the daily out-door rides. Snow storms, zero weather, high winds, are not to be considered. Let the child be clothed accordingly, and properly protected in his carriage, and all weathers are alike good for him. This is not to be regarded as a process of toughening the infant,— a most stupid and unnatural idea,— it simply strengthens him, and promotes his development in every way. He must not and need not be chilled for one minute. A few woolen wraps will prevent this, and these he must have in just sufficient quantity to keep him comfortably warm, not to drench him with perspiration.

It is difficult to persuade some fond mothers that such treatment is not dangerous, while at the same time they are fully convinced that the safe thing for the baby is to make him hug the hot stove all day long! This simply shows that intelligence is one indispensable feature of a good nursery. Without it the most perfect appliances can do no good. One of the most healthy and vigorous boys the writer has ever known went to sleep in his little carriage every forenoon and afternoon, from the time he was two months old, and was then wheeled into the vestibule, and finished his one or two hours' nap in that situation. This continued, winter and summer alike. He was practically in an outhouse, which no artificial warmth ever modified. A better sleeper and a better baby in all respects could not be found anywhere. But however carefully ventilated the nursery may be, the child must get out into the open air as soon as possible. The infant of two or three weeks may begin with a little promenade on the veranda or something equivalent, and may reach out farther and stay longer day by day for an indefinite period. One of the great necessities for this exercise, is the fact that we cannot, no matter how we strive, make the nursery itself a helpful constant abode for anybody. We are by nature out-door animals, and only by slow degrees and long-continued processes of hardening can we be made to endure life shut up in houses. Therefore, we sum this topic up in saying: Get a good open soapstone stove; open wide the window; watch the thermometer; keep the baby out of the drafts; keep him out of doors as much as possible; adapt his clothing to his comfort indoors and out; and the best results will be obtained.

CLEANLINESS

Cleanliness is next to godliness, perhaps, but extreme cleanliness is not exactly synonymous with extreme good health. It goes without saying that the nursery and all its furnishings ought to be clean. The windows, the walls, the floor, the rugs, the bedclothing, the personal clothing of the infant and nurse, ought not to be, to say the least of it, conspicuously unclean. We need not imitate the animals too exactly, yet we

may learn a sound hygienic lesson from some of their habits. With the exception of the aquatic birds, animals rarely bathe. The bird sometimes splashes a little water carefully on his outside feathers, but the performance cannot be seriously regarded as a bath. Some few dogs like to swim, in warm weather, but there is nothing ablutionary intended. On the other hand, fishes are washed all the time; yet they are more subject to disease and fatal epidemics than land animals. As a rule, the health of the animal world is much more perfect and constant than that of the human world, while its attention to rules of cleanliness is of very limited amount. The domestic animal becomes subject to many kinds of sickness just so soon as we begin to house, feed, and clean him. Of course, we have in many respects improved upon the native animal by caring for him. But we have as the result a more delicate, not a more robust creature, and one in need of constant care and coddling.

CLEANLINESS AS A FETICH

All of this means that the subject of bathing and washing and cleaning needs to be carefully thought over. We have all seen the foolish mother whose aboriginal name would be "Woman-Afraid-of-Fresh-Air." But the woman whose terror is a speck of dust, or a little smutch on baby's nose, or a sign of soil on its dress, has escaped notice too long. Her theory is wash, wash, wash, and baby will always be well; and her theory is far from being correct. The baby may be washed too much. Its clothing may be changed too frequently. A new or a newly-washed suit needs to be assimilated before one feels at home in it. A brand-new house is not as healthful as one that has been occupied, other things being equal. Not many babies can digest three newly-starched frocks every day. A full bath, by which we mean a thorough washing in the bath tub, is refreshing in hot weather to some infants. To others it is evidently irksome and exhaustive. The luxury may be indulged in more frequently during the hot season than in winter. It is more useful in the tropics than near the poles. Besides, children differ widely as to their endurance of the plunge. Some are vigorous enough to react promptly, and these enjoy it. Others fret and cry and suffer from it, because they have not a good reaction. It disturbs the action of the heart, as appears from their chilling, shivering, and turning blue, and showing manifest signs of distress until they are well warmed, clothed, and rested.

There is no rule of wholesale application in this matter. We must discriminate between one child and another, and between climates, seasons, and days. What is helpful in one case and under certain conditions, may be deadly in other cases. As a principle, we may say that the

amount of bathing and washing that agrees with any child is the proper amount for that child. A daily plunge in all weathers delights some children. But this is not necessary for any, and it is positively harmful to a great many. With some delicate subjects, the proper way is to bathe them just enough to keep them clean, and no more. Some enjoy a cool bath, while others dread and resist it. For these latter a quick warm bath is the only thing allowable. Thus, in every case we must endeavor to meet the constitutional peculiarities of the child; and these can be discovered gradually by a little study of its behavior during and after the bath. The kind, frequency, and duration of the bath that agrees with the child can easily be determined by noticing whether the effects are quieting, refreshing, and enlivening, or the reverse. And there is no other way by which this question can be answered. It is another case where intelligence is indispensable in the nursery. Old prejudices, notions, whims, fads, and customs must all be subjected to thought, observation, and criticism. An intelligent, wide-awake mother is the life and soul of the whole matter.

INFANT FEEDING

Earth has produced many foods for creatures both old and young, but for the mammalian infant, heaven and earth have produced one food and one only, and that is the milk of the mother. Where this is to be had in sufficient quantity, the dietetics of the nursery are reduced to such extreme simplicity as scarcely to require mention. To give the child this nourishment whenever he is really in need of it, and to give him all that he can digest, would almost cover the entire ground. But many mothers, and not a few physicians (all of whom ought to know better) need to be instructed in this elementary fact. They would not then so readily advise or be advised that artificial foods are as good as that which Nature has provided, if not better. The fashionable or the otherwise occupied mother is too easily persuaded that her bountiful supply of natural, fresh, and wholesome food is really no great treasure after all; that she may throw it away for any one of a hundred substitutes, and her child not suffer in consequence. No error can be more destitute of foundation in fact, sense, or experience, and none can be so pernicious in practice. This is no old-fashioned prejudice, but the manifest truth of Nature, and the mother who wishes to understand infant dietetics, must adopt it as her standard and first principle. Not only does a large part of the animal world bear unfaltering witness to this fact, but, with very rare exceptions, the evidence of the human infant is to the same effect.

THE WET-NURSE

The fact is both natural and rational, all conflicting ideas notwithstanding; and that the mother must occasionally be displaced by the wet-nurse, does not alter the principle. Indeed, when the mother's milk fails in quantity or in quality, the wet-nurse is the only adequate resort; and it is only because this aid is not always available, that there is need for the further study of the topic. But before dismissing this phase of our subject, let a word be said respecting the frequency of nursing.

In general, the younger the nurseling the more frequently it must be fed. For the first three months the infant will usually demand food once in two or three hours, during the day; but the mistake is often made of keeping up this rate also throughout the night. This is not only very trying to the mother, but it establishes a vicious and hurtful habit in the child, which will sometimes thereby learn to hang upon the mother's breast nearly all night long. A different habit is more natural and can be just as easily formed. If the mothers begin at the very beginning, they will find that their infants, like other young creatures, seek the comfort of maternal contact during the night, but do not demand to be fed. But if the infant is thrust from the maternal bed, and required, like Dundreary's bird, to "flock all alone by itself," natural conditions are violated. From sheer physical unhappiness the child awakens and cries. The mother must either force it to cry itself to sleep, or nurse it until it falls asleep, and then return it cautiously to its lonely crib. In a short time the forsaken young one wakens again, and again the same routine occurs. Now, if the child has been well supplied during the day, nine times out of ten it is not food but comfort for which it cries. It lacks warmth sometimes, but always feels the absence of human contact and companionship.

One of the evils growing out of this too early separation of the child from its natural habitat, is the necessity for having the sleeping room warmer than it should be. No one sleeps so quietly in a heated room as in a cold room, nor is sleep in a warm room ever refreshing; the victim awakens exhausted and ill natured. But the infant organism that acquires the warmth it needs, but cannot itself afford, from the physical warmth of the mother's body, is in its true and natural condition. This animal heat is different in quality and effect from chemical heat, such as comes from the stove. Thermometrically tested, they may seem to be identical; but physiologically and psychologically, owing to the more complex origin and relations of animal heat, they differ very widely. In order, therefore, to secure for the child the

fresh, cool air that is needed both for the health of the lungs and for the purification of the blood, the temperature of the sleeping apartment must be lowered twenty degrees or more during the winter nights, and the loss of heat made up to the infant by putting it to sleep with the mother. These conditions favor quiet and prolonged sleep, and do away with the supposed necessity of nursing the child frequently during the night. If the mother nurses her infant about nine o'clock, both of them ought then to have undisturbed repose until daylight, at least.

The baby, however, sleeps when the mother does not — he takes longer naps and goes to bed earlier. He must, then, sleep alone part of the time. To preserve the natural conditions during such lonely hours, let us put the baby in a warm cradle, with a rounded surface, or better yet, in a baby hammock. Not only should the cradle covers be warm, but there should be a hot-water bottle or two tucked in with the baby — not near him, but so that it will keep the clothes warm. If the hammock is used, it should also be warmed. A soft pillow should be laid in it, covered with a thick little pad of cheese cloth — not with rubber — and the baby put on that, and snugly tucked in. A down comforter is warm and light. If it is used it should be held down on either side by hot-water bottles, the warmth of which will then come through the down, agreeably modified.

Of course, these directions apply only to the first few weeks of the baby's life, and to cold weather. But even in hot summer the baby should be covered during sleep with a light blanket, and should have a folded comforter under him. Even in summer, too, he should not lie in a draught.

Moreover, the digestive organs of the infant require periods of rest. Any stomach, young or old, into which food is put so frequently that the work of digestion is made perpetual, will become functionally exhausted and finally diseased. During sleep the bodily waste is least, and supply ought, therefore, to be least during that period. The hibernation of some animals, which is simply a prolonged sleep, is a forcible illustration of this point. The anatomy of the human body distinctly demonstrates this periodicity of feeding; for it has reservoirs for food, the stomach and intestines, and these clamor for a supply at somewhat regular intervals, and refuse more when the demand is gratified. When the food supplied has been digested, and carried by the blood vessels to all parts of the body to be assimilated, a time of rest is given. Digestive activity ceases. Assimilation goes on, building up the bodily structures; and when the previous supply is nearly exhausted, then, and not till then, the body renews its request for more. It is not our business to anticipate this request, but to wait for it. It is worthy of note, also, that this

alternation of feeding and fasting is a more marked feature in the higher than in the lower organisms, and therefore most marked and important in human beings. If men were constructed like some worms, which may be called merely sections of digestive tubing, then, like them, he might eat all of the time. Digestion would be the sole function. But man is destined for many and higher forms of activity, for which he must have leisure, and he is anatomically and physiologically constructed in accordance with this fact. And he begins to practice his future rôle as soon as he is born. Therefore, he feeds not constantly, but periodically, after birth, which is an advance upon his antenatal condition, during which he feeds all the time.

THE MATERNAL SUPPLY

It happens, not seldom, that the mother's milk is deficient in quantity. In some cases much can be done to remedy this difficulty. Usually a marked improvement is effected by giving to the mother copious drinks of various kinds. Among these, thin oatmeal water ranks high. A coffee-cupful of this beverage may be taken by the mother just before putting the child to the breast. The preparation is a very simple one. One ounce of oatmeal is stirred or sifted smoothly into a quart of cold water; a pinch of salt is added, and the mixture is allowed to stand in a cool place for about twelve hours. It is then stirred and strained through the finest strainer, and is ready for use. It will keep good a long time, if kept cold, so that enough may be prepared at one time to last at least twenty-four hours. This may not be a very enticing drink, but it is by no means unpleasant, and its steady use as directed will sometimes make a scanty flow of milk abundant. Many other drinks, such as fennel or coriander seed tea, are recommended for deficiency of milk; and "galactagogues" are also to be found in the drug stores. They are nearly all harmless and may be tried, but are usually found of little value.

No system of dietetics will influence perceptibly the production of milk. It goes without saying that the mother should be well nourished, just as her general health ought to be maintained in every way. But there are marked differences among mothers as to what they may eat without affecting unfavorably the quality of the milk. Some can eat anything that they desire, within reasonable limits; but many will find that certain articles of food promptly disturb the child's digestion. Such are onions, pickles, lemons, oranges, raw apples, strawberries, shellfish, and the cabbage family. Individual peculiarities will exclude other articles also, some of which will be of the most innocent character. Each mother is herein compelled to keep up a little thoughtful observation of her own case, and to be guided by results.

SORE NIPPLES

One frequent cause of the failure of the milk is sore nipples, which are also oftentimes the origin of that great and just dread of mothers — mammary abscess. Here is where the ounce of prevention applies with great force. Sore nipples and all their consequences can easily be prevented, in nearly every case, if cared for in time. And the very first thing to do, and to do instantly, is to use a nipple shield. The infant ought never to be allowed to nurse a sore nipple. What is known as the English nipple shield, the kind that has no tube, is the best. Through this shield the infant is to nurse until the soreness has entirely passed away. There is a local application known as Leye's nipple wash, to be had at any drug store, which may be employed with great advantage, using it according to directions given on the bottle. Of course the infant will object to the shield, but his majesty must learn that there are emergencies in which he will be obliged to be subordinate.

In obstinate cases, which resist all remedial effort, it is better to "dry up" the breast, rather than incur the risk of more serious disturbances. This is all the more justifiable because the other breast, if healthy, will almost double its capacity in consequence, and the child's loss is not so great as would at first appear.

DRYING UP THE BREASTS

As the drying up of the breasts may sometimes be necessary for other reasons also, as, for instance, from the death of the child or some real necessity for weaning, a few remarks on the subject will not be out of place. First, do not apply belladonna ointment or spirits of camphor to the breasts to force the cessation of lactation. Do not strap the breasts down with bandages and adhesive plasters, in order to force them mechanically. Let the breasts severely alone. If, when they are full, they freely discharge themselves, as they often will, and so do not become uncomfortable, that is the only treatment necessary. In a few days lactation will cease.

If this is not enough, rub into the breasts a little camphorated oil three or four times daily, in addition to the use of the pump. That kind of pump which does the work most gently and without causing pain is the best. A very excellent instrument can be devised at home from materials always at hand — a quart bottle and some boiling water. The bottle must have a smooth lip and a mouth large enough to easily take in the nipple. It is first filled with boiling water long enough to thoroughly heat the bottle; the water is then thrown out and the neck of

the bottle dipped in cold water, and thus cooled; the mouth of the bottle is applied over the nipple closely, so as to exclude all air, but not heavily enough to compress the milk ducts so that they cannot empty themselves, and the bottle is allowed to remain in that situation until it is cool. As the air in the bottle gradually cools it condenses, creating a vacuum, which is at once filled by the milk running from the breast. This pump will draw all the milk that can be drawn without violence — which is by all means to be avoided. The massage of the breasts, or hard rubbing, or violent drawing of them by any means, always does harm and can never succeed in removing the milk from them. If the milk does not appear after moderate suction, it simply is not there. But instead we have a breast swollen from congestion, and an entirely different treatment must be adopted, and this promptly, to avert a threatened inflammation.

The treatment now is the application to the congested breast of hot fermentations, as hot as can be borne without scalding the skin. The material used is flannel cloths, saturated with hot water, in which has been dissolved common saleratus (bicarbonate of soda), in the proportion of one heaping teaspoonful to a pint of water. This must be diligently applied, changing the application often enough to keep up the heat, about once in three or four hours. The breast is then to be dressed with camphorated oil and allowed to rest until returning discomfort, pain, and distress signify that the process needs to be repeated. Further than this, domestic treatment had better not venture. If the patient becomes chilly and feverish, and the symptoms of the breast do not readily yield, it is time to put the case in the care of the family physician, if this has not already been done. It must be borne in mind that a breast which threatens to become inflamed is a breast which threatens abscess, and will certainly develop in that direction if the mischief is not arrested early. It is well also to know that such a breast is not always rendered unserviceable by passing through a temporary stage of disease. On the contrary, many recover with functional power uninjured. Therefore, even an inflamed breast ought to be gently drawn with the breast pump three or four times daily, taking from it whatever milk it contains. This will relieve the tension and reduce the weight of the breast somewhat, and so place it in more favorable conditions.

Even if the product of a breast is but small in quantity, it has great value. Any child will thrive better on an artificial food if the mother can add something of her own milk to its dietary. In general, it may be said that infants thrive best on breast milk alone; but will do very well on two-thirds of this and one-third of artificial food. Many will even do well when the breast milk is only half of what the child needs, and some will do fairly well when it is reduced to one-fourth. The mother ought not,

therefore, to abandon nursing because she has but little milk. On the contrary, she ought to preserve the small supply carefully, because of its great usefulness always, but especially because it is the only food to be relied upon in case the child becomes ill.

In some rare cases the milk of the nurse or mother does not agree with the infant. The evidence of this is the fact that the food is vomited soon after it is swallowed; also that it provokes a watery, curdy diarrhea; and finally that the child emaciates under the persistent use of it. For this there is no remedy but a change of food. If the child thrives perfectly, no importance need be attached to its occasional vomiting; for in such cases it means that the stomach has been overloaded.

ARTIFICIAL FEEDING

Do as we will, however, cases will occur, and that not infrequently, when the mother's milk fails utterly, and the problem of food becomes acute.

The true remedy for this mishap is a good wet-nurse. If such a substitute can be obtained, the difficulty is overcome at once and perfectly. No more need be said. Whatever objections may be offered, and they are many and weighty, they are not dietetic objections. Her expensiveness alone may rule her out from many families; so may other considerations, we admit. But for all that, she is the only adequate substitute for the mother in the matter of diet, and it is the intent of this article to set forth the best diet for infants, before all things.

But if we cannot have the wet-nurse, what shall be our next resource? We have come upon a long list of troubles hard to bear and impossible to avoid.

In the first place, all artificial foods are necessarily bad. Some are worse than others, undoubtedly; but none are good. They cannot be made good. They cannot be made equal to the natural product. At one time the physiological chemist, and the doctor who listened to him, thought that breast milk might be just as easily dispensed with as not. The impression seemed to be that Nature had gone to a great deal of unnecessary trouble to produce that particular pabulum, when a simple chemical apparatus could present us with a superior diet. Especially was the future drawn upon as certain to demonstrate that a mother's milk could be best made in the laboratory. After long and varied experience, this crude thought is lapsing into the obscurity to which it belongs. The truth is that maternal milk is one of the most thoroughly elaborated products of the animal kingdom. There is a finer and more minute complexity of tissue and structure and function in a single micro-

scopic milk granule than there is in all the laboratory machinery of the world. Therefore, while this machinery can do much that is useful and wonderful, it cannot make a drop of maternal milk, nor anything remotely resembling it in history, quality, or nutritive value. Moreover, nursing a child is Nature's method of transfusion of blood. The blood of the mother, but slightly altered in the milk, is never exposed to the outer air, but passes from the veins of the mother almost directly into the veins of the child. Artificial food and feeding are very clumsy imitations of this perfected material and mode. So while we are grateful to the physiological chemist for coming to our aid when the mothers fail, we must warn the mothers not to fail too readily, for we have no substitute that can compare with them.

WHAT IS THE BEST ARTIFICIAL FOOD?

Goat's milk; asses' milk; cow's milk; in the order named. The first can be supplied, and ought to be, in sufficient abundance to meet the growing demand. The second is out of the question now. The third is good in the country and warm from the cow, but is unstable in quality when it has to be procured from the city dairies. Moreover, it requires all kinds of modification to suit different children. The best food, then, is always a milk, the better the nearer it approaches human milk. And as cow's milk is the most readily procured, some modification of that fluid is usually the first to be tried. A home-kept cow is often the best source of supply for those who live in cities. But then the milk ought to be drawn fresh for every nursing if we wish for the best results; or we must approach this as nearly as possible. If this food constipates or passes the bowels undigested, it must be modified by the addition of some other food. The most useful of all such articles is old-fashioned oatmeal water, the preparation of which, for the mother, has been before described. It may be treated in the same manner for the child, and added to the fresh milk in quantities to be determined by experience. The oatmeal water, for the child, ought after cooking to be as thin as poor milk, and is to be tried in proportions of one-eighth, one-fourth, or one-half the quantity of the milk used. The exact amount will finally be decided by the effect upon the child, notably upon the intestinal discharges. When these are natural the food is about right.

Many of the artificial preparations have here their rightful place — to modify cow's milk. Of these there are many, and no one can be called the best, because that is always best which agrees best with each particular child. In this respect no two infants are alike. One baby's food is another baby's poison. The mother can trust no advice, not even

that of the doctor, unless he advise her to try one food after another, until she finds the one that agrees. There is no other way, except in the case of breast milk which we know beforehand is, practically, always the best.

MODIFIED MILK

The basis of every infant food ought to be milk of some kind. Not one child in a thousand will wholly refuse milk, and that one is likely to show in the course of time the ill effects of a diet without milk. Physicians have lately learned that a very painful and dangerous form of scurvy sometimes attacks children who are fed on preparations of grain only. But in composition with as much milk as the child can digest, these same foods are very useful. Such preparations are numerous, and it is better for the mother to confer with her physician before she decides upon any. We simply wish to emphasize the fact that the baby who must be deprived of his natural food, must first be kept in touch with milk of some kind, and when this disagrees it must be modified by the addition of other articles. To the infant, diet comes before everything; even temperature and fresh air are not so necessary to him. He may live in impure air; he cannot live on a food that he never can digest. To find out what special preparation of food will be helpful for the child is the first thing to be done, and that is oftentimes a difficult task. Neither chemistry nor physiology nor philosophy will settle the question for any child. Only direct experiment can do it.

HOW TO ANALYZE THE BABY'S FOOD

Surprising facts are encountered in this search for the right food. The writer knows of one fine, plump, perfectly healthy babe of seven months whose mother's milk failed before he was a week old. She gave him the only food that was at hand, undiluted milk from the milkman who supplied the neighborhood; and it proved to be for the child a perfect food. I have seen others flourish equally well on imported condensed milk diluted with about ten parts of water; others again rejecting the imported, but thriving well on the American brands. The variety is endless. But the infant himself is the only analyst worthy of attention, and to his verdict we must all bow. And why not? Is there any known analytical process equal to the digestive process in the child, or any laboratory that can compare with his digestive and assimilative organs?

Some will object that this is making the infant a subject of experiment. True; but we cannot do otherwise. Speculate and analyze as we may, after all is done the same experiment is to be made. After we

have been made sure that a given food contains just the same elements as breast milk and in just the same proportion, the decisive test is still to be made, and that is made with the child. The proof of his pudding is always in the eating.

We do not mean to assert that all efforts at analysis short of a child's experience are useless. On the contrary, they aid considerably in the manufacture of foods for our purpose. But the intent is to make it clear that the crucial test of all foods is the physiological, in its most perfect form. By that test it is established that human milk drawn directly from the breast is the one perfect food for infants. If we cannot have that in full quantity, then we secure all that we can of it, and eke out with foods that physiologically resemble it most closely, that is to say, with other kinds of milk. If these disagree, we seek some prepared food that will modify them favorably. This we find among the many products offered in the market, and proceed to prove them by experiment.

THE BABY'S BOWELS

There is one effect of a milk diet which quite frequently occurs, even when the mother's milk alone is used, and which causes no small amount of trouble in the nursery, and that is persistent constipation. The subject belongs properly to medical treatment, but is mentioned here because it almost always runs through a long course of domestic doctoring before a physician is consulted. The natural anxiety of mothers and the abounding advice of neighbors do a great deal of harm in this matter, and generally end by rendering almost incurable what at first was a trivial ailment. As a rule, it is this ignorant interference with nature that does all the harm.

If the baby is slow in evacuating his bowels, goes a few hours or even a day beyond the customary time, there is no occasion for domestic terror. The first and best thing to do is to wait until a spontaneous movement occurs, and not to rush immediately for the syringe or suppository, the castor oil or other cathartic medicine. It is indeed easy to produce prompt results in this way, but the first step will necessitate another, and this another, until the child will never have a natural evacuation. The effect tells upon the general health of the child. More and more heroic measures are required as the victim becomes accustomed to the artificial stimulus, until the hour for this operation becomes a daily trial to the infant and to all concerned. Therefore, we repeat the injunction to let the baby alone, as the one sure, safe, and harmless treatment.

Only one measure may be endorsed. Usually when there is delay on the child's part, the movement when it does occur is perfectly easy and

natural, thus proving that interference was not needed. But if the result is a constipated and difficult passage, the case is altered. Then a remedy is to be sought, and the best of all is a little breakfast of oatmeal water for the baby, taken just before its morning nursing, or at any other time that may be convenient, but always just before nursing. From a tablespoonful to a teacupful is the limit of the amount required. This will be regulated by experience. If less will not accomplish the result desired, more may be used. If a very finely strained preparation fails, it may be used coarser and coarser. This recipe is for habitual constipation, which is due to the milk diet, and cannot be corrected without some change of food. The oatmeal water may be sweetened, if the child objects to it without sugar; otherwise a little salt only is to be added to it.

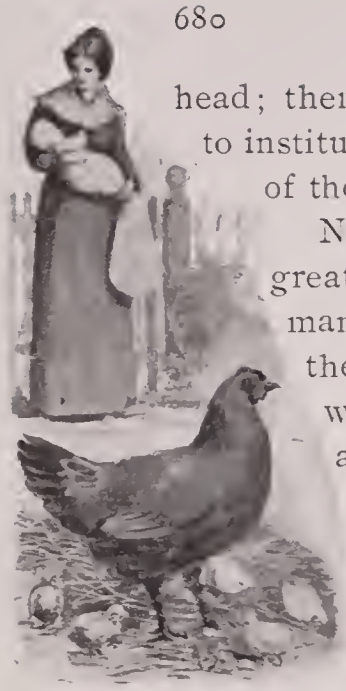
In short, in this as in all other matters pertaining to the training of the child, we find that our first lesson is, hands off! We need to be very sure when we undertake to do anything, that we are not interfering with Nature, but helping her. Like an indulgent mother, she puts up with a deal of fooling, hoping thereby to teach us to love and understand her, but when she has a really delicate and important operation in hand, like the building up of a baby's fine organism, she tells us that we may watch but must not interrupt or bother. If we disobey, she promptly punishes us.

Our first duty, then, is to see what Nature does; our second, to follow her plain directions as closely as may be, giving our children plenty of her good air to breathe, keeping them warm, feeding them the food she prefers, or the nearest possible approach to it, and for the rest chiefly giving them over to her and letting them grow.

R. Norman Foster, A.M.; M.D.

THE ORDER OF DEVELOPMENT

Observers have been forced to admit, on comparing the human baby with the young of other animals, that the comparison does not reflect credit upon the baby. The mother — who is usually not an observer — is not so ready to admit it. She would not exchange her helpless little red manikin, with his almost unseeing eyes, his undeveloped ears, his bald head helplessly waggling about, for the most intelligent colt that ever stood safely upon its long legs in the first hour of its life, or the downiest chick that ever successfully directed its well-managed head and accurate eyes toward the picking up of a crumb a few minutes after leaving the eggshell. Being entirely convinced in her heart, she does not stand in any great need of being convinced in her



head; therefore it is doubtful if it would ever have occurred to a woman to institute comparisons between her baby and the babies of the rest of the animal kingdom, if it had not first occurred to some man.

Nevertheless, such comparisons have brought out many facts of great value. The striking central fact, that the young of the human race is distinctly more helpless, less completely formed, than the young of any other creature, led to an inquiry as to why this was so — an inquiry whose answer is of direct practical importance in the rearing of children.

As Mr. John Fiske has pointed out, the meaning of the long human infancy is that the activities of the race have become so many, so widely varied, so complex, that they could not fix themselves in the nervous structure before birth. Moreover (though, so far as I know, Mr. Fiske has not said so), the modification of the baby's nerves and brain necessary to bring him to his full human powers, requires a larger and richer environment than can be given before birth. If it were true that women could influence their children by a careful course of education during pregnancy — if intra-uterine education had any scientific foundation whatever on which to rest — we might expect the baby to come into the world a more completely organized being than he is; and many of us, without in the least waiting to prove our opinions before they crystallize into convictions, do, as a matter of fact, arrive at the conclusion that the baby has reached a stage of development at birth which he really reaches only some months later. But it is not true — intra-uterine education is not possible — and, if it were, according to Mr. Fiske's law of infancy, we should by practising it only be limiting our children's future development. Nature needs all of the nine months before birth, and all of her concentrated energies, just to make ready the machinery, to make a safe physical beginning.

When the baby is born he is, as Virchow says, merely a spinal animal. The higher brain centers do not yet exist — or, if they exist, are in too incomplete a state for activity. They develop slowly, stimulated by the sensations which the baby experiences. Within the womb, there are few, if any, such sensations. It is true the unborn child may be made to move by the laying of a cold hand upon the mother's abdomen, and kicking motions also may be excited; but these are reflex movements, not requiring the action of the higher brain centers. The spinal cord and the cerebellum are enough to produce them, as is proved by the fact that they may be induced in animals from which the higher part of the brain — the cerebrum — has been removed.

In the darkness and silence of the period before birth, the body is built only so far as it must be in order to maintain life and get ready for

the next stage; but the higher development of the young creature requires a wider environment. Not out of silence and solitude is the soul of the child born, but out of the living world. An egg may suffice to perfect the chicks; the world of nature and of men and women is needed to perfect the human being. Yet when the child is born he does indubitably bring with him distinctive mental and moral tendencies, reflected in some mysterious way from those who called him into being. Are not these traits, these individual peculiarities, you may ask, begun before birth; and may not a system of training on the part of the mother assist the growth of the right ones?

No one knows yet what the manner and method of heredity is — yet we all know that it is not the same as antenatal impressions. For such impressions are naturally from the mother only, while the child often inherits as much of his peculiar personality from the father as from the mother — or even from remoter ancestors, who died before he began to be. Whatever heredity may be, it is not the action of the mother's mind during pregnancy that determines it. As nearly as we can say with truth, it is the union of the father's whole character — the undeveloped character that he inherited from his ancestors, as well as the character built by after years of conscious life — which is passed on to the child, modified by union with the mother's character, with all its undeveloped possibilities. No one yet knows the law by which children in one family sometimes resemble the mother and sometimes the father. It may be a question of health and vigor at the moment when the child's body is first called into being that determines which of the two shall predominate. At any rate, the only education before birth worthy the name begins with the childhood of the father and mother. Teach your boy now to prepare for fatherhood; make him know that as he shapes his character now so is he also shaping the character of his children. Let the maternal instinct of your daughters aid them in correcting their faults of temper and judgment, for by so doing they are at least beginning the education of their children, which should, as Holmes said, have begun with their grandmothers. Meanwhile, it is too late for you to worry. Nine months of the most intense effort will not change the work done in your organism by all the years of your life.

When the child is born, then, he has certain powers — very few compared to what he will have — and certain inherited tendencies which may be greatly modified by education and environment. Let us see what he is, and what he can do.

The average boy-baby weighs about seven pounds at birth; the average girl about six and a half. The head is much larger in proportion to the body than in after life; the nose is incomplete, scarcely more than a pair of broadspread nostrils; the legs short and bowed, with an ineradi-

cable tendency to fly back to the antenatal position — flexed upon the abdomen — as if they were fastened there by India-rubber bands. The baby's body is 74.8 per cent water, while the adult's is 58.5 per cent. The plates of the skull are not completed and do not fit together at the edges. In difficult births these plates often overlap, and the child for a few days or weeks has a misshapen head, which, nevertheless, comes right in time. The bony inclosures of the middle ear are quite unfinished, making the care of the newborn child's ears a matter of no less importance than the care of his eyes.

The baby can cry, and suck, and sneeze, and cough, and kick, and hold on to your finger, and this is about all he can do. To every mother this seems wonderful enough, and so it really is. All of these aets, though they do not yet imply personality, or even mind, do imply a wonderful organism. The simplest of them requires the coöperation of many delicate little nerves and muscles, and is wonderful enough to be quite beyond the power of the seientists to explain.

One of the first things to be observed about the young baby is the almost constant motion which he keeps up while he is awake. He stirs, and nestles, and kicks, and waves his arms about aimlessly. Yet he is altogether too weak to turn himself in bed or escape from an uncomfortable position; and he remains so for many weeks. Nevertheless, this constant, gentle motion is his first step toward getting control of his body, and indeed, toward knowing himself at all. It is, therefore, of the first importance, educationally, that he be given freedom to move. Clothes, even of the lightest and softest material, do obstruct and impede him more or less, and from the beginning he should be given time to move and stretch upon the nurse's lap before the fire, with his elothes off, or at the very least, with his clothes lifted away from his feet. His back should be rubbed, thus supplementing his natural gymnastics with a little gentle massage—a delight both to mother and child.

It is with that intuition which so amazingly lifted him to the level of modern science, that Froebel seized upon the power of movement to first hint to the mother how she could help and teach her child. The "Play with the Limbs," here given in Miss Blow's translation, is not intended to enlighten the child, who will not for long understand it in the least, but to help the mother to live with the baby in that period of his life when motion means so much—means, indeed, the dawning of conseiousness. In this play, the mother is represented as laying the baby, undressed, upon a pillow, and as she stands over him, seizing the flyaway little legs softly by the ankles, and moving her arms with them, sometimes helping, sometimes hindering them, but always making them more conscious, because productive of more varied sensations than the baby could manage for himself. When we realize that consciousness

apparently grows out of sensations many times repeated, by and by remembered and compared, we shall see how important it really is that the mother should aid her child, by following his own instinct, as he moves along this road to self-knowing.

After moving the little limbs, she will oppose her hand to them, or her breast, and let him kick against her. Who can say how soon out of this play will begin to emerge a dim perception on the baby's part that there is a difference between himself kicking, and that which he kicks against — in philosophical parlance, between the Me and the Not-me? No mother could wish to be an inactive factor in bringing about this great result, the beginning of conscious personality. The "Motto," by Henrietta R. Eliot, quoted by Miss Blow, well expresses this feeling: —

PLAY WITH THE LIMBS

Motto

Watch a mother's answering play
When her happy baby kicks,
She will brace her hands to please him,
Or in loving sort she'll tease him,
With her playful tricks.

This is not mere fond caprice,
God inspires the pretty strife,
She is leading a beginner,
Through the outer to the inner
Of his groping life.

Song

Up and down, and in and out,
Toss the little limbs about.
Kick the pretty dimpled feet:
That's the way to grow, my sweet.
This way and that,
With a pat-a-pat-pat,
With one, two, three,
For each little knee.

By and by, in work and play,
They'll be busy all the day,
Wading in the water clear,
Running swift for mother dear.
So this way and that,
With a pat-a-pat-pat,
And one, two, three,
For each little knee.

Of course, the very first aimless movements of the baby are not to be treated in this way. He has enough to do, the first weeks of his life, to get used to the strange new conditions of it. Light, sounds, touches on his sensitive skin, together with the new organic sensations of breathing, digestion, and suction are all that he needs, and sometimes almost more than he knows how to endure. But by the time the mother is up and around, well enough herself to feel like playing with the baby, he will be ready for a very little play every day. And the more systematic and simple this play is, the more it will benefit him, helping him to get control of his legs and hands.

And hands, I say, for Froebel's play is only suggestive; its principle applies as much to the baby's hands as to his legs. They, too, may be caught and held, then let go, clapped together, rubbed and patted,— and what real mother does not do it, out of sheer delight in the dimpled, soft little things? Yet sometimes she thinks she is wasting time,— that she ought to be doing some bit of housework, rather than playing with the baby. Perhaps, if she knows that she is really giving him his first lessons, she will no longer reproach herself.

I think it is Marion Harland who tells the story of a mother who descended like a desperate whirlwind upon her little girl playing on the doorstep in the sunshine, and exclaimed: "Mother is going to have a moment's cuddle with her darling little girl, *whatever!*" Struck with the tragedy of her tone, Marion Harland inquired as to what it was that was depriving her of the natural joys of motherhood, and found it was — lemon pies!

But to return to the newborn child: He needs all the little comforts his mother can give him. All child students are agreed that during the first year of life children suffer from many obscure discomforts. The first attempts to use their organs are trying, and it is long before they succeed in using them perfectly. For example, the breathing is for a considerable period irregular, even during sleep. The frequency of colic comes from the newness of the digestive apparatus, which is easily upset. Cold, as already pointed out, is a great source of distress; and, in general, the effort to adapt nerves and muscles to the new conditions of life is productive of discomfort. Perhaps it is because of all these things, but it is also because of the carelessness and ignorance of parents, that the mortality of newborn children is so disproportionately great. According to Compayré, twenty-five per cent of all babies born die within the first year. Children from one to six years old show the next greatest mortality — 15 per cent.

With these facts in mind, surely no mother need regard herself as foolishly indulgent if she give her child all the little pleasures she can — pleasures considered not from her standpoint, but from his. She will take time to give him his daily outing, and will arrange her housekeeping so that it will run on a simpler scale, allowing her more time to spend with the little being who is more truly dependent upon her human care and sympathy now that he is born than he ever was before. Before birth, he needed merely a placid, healthy mother; now he needs an intelligent and sympathetic one.

The first pleasures of a young baby are sucking; a warm bath and a warm, curving bed; soft light, and sweet sounds. A moderate muscular activity is one of his chief joys, and, as we have just seen, as necessary as it is delightful. And, indeed, all these pleasures seem to be only an incentive to get the necessary activity performed. Suppose a baby did not like to suck — what disaster! The human race would soon become extinct. Suppose it did not like a soft light: it would never learn to see. Suppose sweet sounds were not agreeable to it, and that it lived in dread of disagreeable ones: it would never hear, or at any rate, hearing would never be developed as it is now — we should have no such thing as human speech. Even the pleasure in the warm bath and the bed is necessary for existence, for it secures the cleansing of the skin and the rest necessary to the growth of the bodily organs.

The Divine plan seems to be to lead little children by delights as well as by penalties. On the one hand are pains and penalties — the "Thou shalt not" of Nature's ten commandments, which, of course, image exactly God's ten commandments. On the other side are the commandments and promises: "Thou shalt," and if thou dost thou shalt inherit the kingdom. Shall mothers set themselves against these laws and, for any purpose of feather-stitching or making lemon pies — yes, or darning stockings and sweeping floors — deny themselves the glory and duty of leading their children by delights, reserving to themselves only the grim privilege of discipline and punishment? It makes one's heart ache to think that even newborn babies are marked out for victims of the mistaken puritanism of our age, and are left to wail in the dark, fighting their tiny fights with hunger and thirst and cold, in feebleness and dismay, alone.

The will seems to be born from the fact that some sensations are agreeable and some disagreeable. The tiniest baby can like or dislike the things he feels, and by and by, after hundreds of repetitions of the agreeable or disagreeable sensations, there will be a dim memory — they will be recognized as having been experienced before. When enough of them are so recognized, there will be comparison, and then for the first time, choice. When the child chooses to escape from a disagreeable

position, for example, and makes an effort to do so, his will has begun to take possession of his organism. When he first cries in discomfort, it is not in order to get relief, it is merely to give expression to his feelings — an expression of which he is himself barely conscious.

Suppose now there is a Spartan nurse in charge, who decides that he should be left to cry, that it is bad for him to learn that when he cries he will be relieved, what then? Why, Nature's law is interfered with; for it is exactly Nature's plan that he shall learn that if he cries he will be relieved. It is the first herald of language — not yet the dawn, but the morning star. Moreover, when the uncomfortable baby, wailing unconsciously — for even brainless babies cry — first begins to connect his crying with relief, he first begins to associate higher brain centers with the spinal centers that have heretofore sufficed him; he enters upon a higher stage of existence. Nor is this stage at all a moral one as yet — it is merely a stage in which the brain begins to act, in which a dim will first begins to control the mechanism of the body. How absurd, then, to begin at this stage the moral training of the child! He needs to get a moral nature before it can be trained.

As Compayré says, "It is Nature, it is not yet the individual, which manifests itself in the first motions and the first cries of the child." Shall we undertake to discipline Nature herself, the Mistress of Laws?

The newborn baby needs caresses. He needs them because of the bodily warmth which he is always craving, and also for some more inward and mysterious reason. We have already noted the strange fact that children in Foundling Asylums and hospitals, where they are brought up on the most hygienic principles, do not thrive as do babies in poor and ignorant homes, where, nevertheless, love rules. When all the physical requirements are satisfied, there remains for the human being, not only intellectual requirements, but spiritual and moral ones. Love is the deepest force in the life of the adult being; one might suspect from this that it has its roots deep in the emotional nature of the child — deeper than in his brain, even.

Emotions, as we know, move not only our conscious thoughts, but our unconscious processes of respiration, digestion, circulation. We cannot eat when we are overwhelmed with anxiety; we hold our breath in stress of fear; we grow pale with dismay. These are all activities of the spinal cord and the medulla; the higher brain centers are not required in them at all. If James's theory of the emotions is true,— that emotion is the feeling of the changes in our organism produced by a certain fact,— then we might even expect to have emotion present without any coöperation of the higher centers at all. And this, indeed, seems to be true. Microcephalic children, with almost no cerebrum, have been known to show affection. May we not thus account for the cases of

unreasoning fear, for example, wherein our better reason tells us plainly that we ought not to feel fear?

We see the same thing in the instance cited by James: As a boy, he once saw a horse bled; the blood was in a bucket, and, with boyish curiosity, with no idea of anything offensive in the act, he was stirring it round and round with a stick, when suddenly, to his own utter amazement, he fainted. He relates that he had never heard of the sight of blood producing faintness or sickness, and after recovery he could not get over his surprise that the "mere physical presence of a pailful of crimson fluid could occasion in him such formidable bodily effects."

We, ourselves, know better than to be afraid of the number thirteen, yet some cannot sit down to a table as one of that number of guests without an emotion of fear, quite in despite of all reason. It is the same with all superstitions — looking at the moon over the wrong shoulder, watching the kettle boil, being afraid to boast of good luck, and the rest of the absurd list.

If, then, it be assumed as probable that the child can feel affection, in some degree, even before his higher brain centers are developed; and if it be granted that he will feel this emotion as a result of the physical sensations which we are accustomed to associate — and which he will in after life associate — with love; does it not follow that the child who is caressed will, all other things being equal, be more deeply loving than the one who is not?

Once, dreadful to relate, I heard a lecturer — a woman, too, and a kindergartner — advise mothers not to kiss and caress their babies lest they thereby sow in them the seeds of future sentimentalism! I cannot but believe this to be an extreme case of unnaturalism; yet it illustrates the kind of error that is often made in dealing with children. It consists in the argument — as for example, in this case — that what one does not want the man to be or do, that one must not permit the child to be or do — an argument as specious as it is fallacious.

For the child is not the man in miniature — he is, in some respects, another order of being. We would not put him at once upon the food which he must have in later life, because we plainly perceive the lack of teeth. No more should we exact of him adult morality, for in that respect also he lacks the mental development. The barefooted boy will not necessarily eschew footwear when he comes to man's estate; nor will the baby who puts everything into his mouth become a glutton. The little baby does not need to be "early inured to self-restraint" or anything of that sort. He has, as yet, almost no self at all; and restraint would be a very bad thing for the feeble germ of it. A wise gardener prunes the rank vine; but no one prunes the young plant just pushing through the soil.

Like the plant, the baby wants proper environment, and food, plenty of the sunshine of love, and room to grow in.

The first sign of emotional life in a young child is, as every mother knows, a smile. Perhaps this is not a strictly scientific statement, if under the term emotion be included the sensations of hunger, and various forms of physical distress; but in the sense of a distinctively human emotion, it is true, for it is a human emotion, in spite of the fact that monkeys and dogs have been known to laugh, in a fashion, and monkeys are susceptible of tickling in the armpits. We must all admit that these rather seem human-like manifestations in the higher animals than animal-like manifestations in the human being.

The date of the appearance of the first smile varies much in the records published. As Preyer points out, a smile on the face of the sleeping child, after a good meal, is without question an expression of satisfaction, but it is not yet a smile in the true sense of the term. He saw such a smile on the face of his little son on the tenth day of his life. The perfect smile, with open eyes, was not seen until the twenty-fourth day. Miss Shinn was sure of a smile provoked by a touch upon the lips, the day before her little niece was a month old. Darwin was not able to record an unmistakable smile on the faces of two of his children before the forty-fifth and forty-sixth days. His boy was a hundred and ten days old — three and a half months — before the game of "peekaboo" aroused in him what his father termed an incipient laugh; while Professor Preyer observed an "audible and visible laugh, accompanied by a brighter gleam of the eye," on the twenty-third day. But, as this observer says, "It depends essentially upon the nature of the occasion of the smile, at what date the first smile shall be fixed."

Once the baby has smiled, however, the mother has something to do, to help it to bring this almost unconscious expression of contentment up to the level of a conscious act, performed in obedience to the will, for purposes of communication. She has the instinctive desire to do the very thing she ought to do — to smile at the child, leaning over and talking to him, and singing to him. If she has the wisdom to trust this instinct she will be safe, but we mothers have reached the point in our own development where we must make over our instincts into conscious acts. Like the child, we must make those acts volitional and rational which before were only half-conscious and instinctive.

Dr. Seguin, in his "Report on Education," recommends that colored balls and tassels be hung above the baby's crib, that he may, on waking, have these pleasing objects to smile upon. Preyer says his boy's first laugh was excited by a colored tassel; but Froebel says that the mother's face and smile must greet the waking child. In conformity with this

dictum, Miss Shinn; in that really wonderful and beautiful book, "The Biography of a Baby," proves quite conclusively that a swinging ball cannot do much for a pupil whose sense apparatus is not yet in condition to see properly the outline of the ball, and that "Nature has provided an educational appliance almost ideally adapted to the child's sense-condition, in the mother's face, hovering close above him, smiling, laughing, nodding, with all manner of delightful changes in the high lights; in the thousand little meaningless caressing sounds, the singing, talking, calling, that proceed from it; the patting, cuddling, lifting, and all the ministrations that the baby feels while gazing at it, and associates with it; till finally they group together and round out into the idea of his mother as a whole."

As every one knows, the baby is at first unable to hold up his head. To us, who perform this act habitually and unconsciously, this inability on the baby's part seems particularly surprising, but the truth is that no other animal holds his head up constantly and effectively except man. The human baby seems to be induced to make the effort mainly by a desire to see more clearly. It is, therefore, a necessity of the mental life. There can be little doubt that the baby could see clearly enough for all physical purposes with his head hung down, but not clearly enough to make him master of his horizon.

The first efforts to hold the head erect, however, seem to arise merely from an overplus of nervous energy, which makes the neck muscles contract, just as it makes other muscles contract. The first slight raisings of the head are like the first kicking movements — merely impulsive — and the child himself is entirely unaware of the action, and, therefore, without any notion of the end toward which the motion tends. In all the progress of a new baby toward mastery over his own organism, one is struck with the way in which all the natural world works toward an intellectual and moral end, quite without the coöperation or knowledge of the individual most concerned. By the time the child attains an intellectual and moral consciousness, he may conceive himself as master of the natural world; but first he is its product; and never is he wholly free from dependence upon it. But how does it happen that the natural laws work toward the production of an intelligence capable of denying matter — of conceiving it entirely as a form of consciousness? How does it happen to evolve a moral consciousness which, instead of conducing to the survival of the fittest, insists upon the duty of the strong toward the weak?

In addition to the obvious advantage of holding the head erect for purposes of looking, is the further advantage that it frees the ears of the child, as he lies against his mother's breast, and thus conduces to hearing. Preyer considers that the balancing of the head is one of the first indi-

cations that the child's will is taking possession of his muscles. He explains that at first the contraction of the muscles that balance the head is purely impulsive, but that as the agreeable consequences of them become evident — as the pleasant lights and sounds flow in upon the child — he desires these contractions; he makes the effort; his will acts.

Not only do all of us let the head drop and bob when we go to sleep in an upright position, proving that when the will sleeps the head is no longer balanced, but every one must have noticed the common tendency to slip down in a chair until the back of the neck is supported, when engaged in earnest conversation; or to support the head on the hand, when engaged in study. In both of these instances we need all our will power for mental concentration, and we instinctively try to utilize the amount otherwise needed to hold the head.

Preyer's boy held his head erect during his sixteenth week, — that is, when he was between three and four months old. Miss Shinn's niece held her head perfectly for a quarter of a minute at a time at six weeks old, and by the end of the second month "could balance it for many minutes with a little wabbling. This uncertainty soon disappeared, and the erect position of the head was accomplished for life."

R. Demme's observations on a hundred and fifty children go to show that "very powerfully-developed infants carry the head properly balanced as early as toward the end of the third or within the first half of the fourth month of life; children moderately strong do this for the first time in the course of the second half of the fourth month; and more delicate individuals, that fall somewhat below the normal standard in their nutrition, do not attain to this before the fifth or the beginning of the sixth month of life."

It will be noted, therefore, that this is an important point for mothers' records — not necessarily conclusive in itself, but with other things giving strong evidence of the nutritive condition and actual vigor of the child.

When, laying one's finger in the flower-soft, helpless hand of what my little daughter once called a "bran-fresh baby," one suddenly finds it caught in a grasp of surprising force, one may be tempted to suppose that the child clasps it intentionally. But he is, as it were, compelled to grasp your finger by the action of his own muscles, which do the deed of their own accord, without waiting for orders from the inadequate young master throned in the cerebrum. The baby has no more to do with it than we have with the spring of our muscles when we are suddenly startled. This first grasping is called "reflex grasping"; that is, the muscles react against the stimulus presented by the touch of one's finger without any interference of the volition, exactly as the muscles of a decapitated frog contract when a current of electricity passes through them.

All our little involuntary muscular tricks are of this description — the peculiar way we hold the pen, the small changes of muscular control which make our handwriting different from that of any other person, the way we crook our little fingers when we drink from a cup, the way our fingers play on the piano a selection they have once mastered, even when we cannot ourselves remember the intricacies of the harmony — these acts, into which consciousness does not enter, unless our attention be called to them, are reflex, and the baby's first vigorous clasp of the finger is of the same description.

Dr. Louis Robinson, conceiving that this would make a fine Darwinian point, tried experiments upon some sixty newborn babies. He found that they could sustain their whole weight by the arms alone when their hands were clasped about a slender rod. They grasped the rod at once, and could be lifted from the bed by it, and maintain this position by the half minute — a feat that would be quite beyond the ability of many adults. He argued that this early strength of arm — which, by the way, begins to disappear soon afterward — was a survival from the remote period when the baby's ancestors were monkeys, or monkey-like people who lived in trees. The baby who could cling best to his mother's fur as she leaped from tree to tree, would be the baby to survive and to bequeath his traits to his descendants. Some observers think that a baby's well-known love for pulling hair harks back to the same period.

However this may be, it is undeniably true that the baby's ability to use his hands grows before his ability to use his legs. His legs are absurdly disproportioned to his height — or would be, if he were a miniature man — and it is possible that his clothing hampers his use of them; but in any event, during the first months of his life their chief activity seems to consist in curling and uncurling, and their chief use in this world to entice, by their pink curves and general loveliness, mothers and aunts and grandmothers to be their owner's willing slaves. Who that has felt a baby's fat little foot kick against her cheek, while the tiny toes tried to grasp like fingers, but has felt it an impossibility to neglect the wishes of so endearing a young creature? Baby's charms, luring victims into subjection, are as canny a device of wise old Dame Nature, as the charm of young womanhood, leading men to pause in the pursuit of power and spoil and to give to love a place in their hearts. Women ought to worship babies, just as men ought to worship women. Love grows thereby and becomes more of a power in the world.

Appealing as a baby's feet are, his hands, flying about from the first day of his life, touchingly small and unable, dimpled, deliciously formed and cased in finest silk, are his chief means of subjecting the world about him. They are kissed and kissed, from his first birthday until

he is large enough to protect them with a good coating of various foreign substances. Do not the tender nerves convey to him some sense of what those warm kisses mean? Not precisely that, perhaps, but a sense of pleasantness, by and by associated with certain presences, with other loving pressures of his body, with soft, murmuring sounds, and the sight of a smiling face. By what magical process these things are translated to mean love, no one knows; but they are so translated, as soon as the baby is able to understand expression at all.

During the first weeks the hands are much up and about the face. This is largely because they, like the legs, tend to reassume the antenatal attitude. By accident, they reach the eager little mouth; they are sucked promptly, and then, after many repetitions of this experience, arises that double sensation that is one of the first steps toward self-consciousness. The child feels himself suck his own fist; he feels his fist being sucked. Some day it will dawn upon him that that fist belongs to him — the being who owns the sucking mouth. Up to this point, as Miss Shinn has observed, and many mothers with her, the baby is often grievously surprised and indignant over the fact that when his arms begin to wave about, his comfortable fist is mysteriously jerked out of his mouth. This experience, too, with its discomfort, leads him to make an effort to control things, and presently we see him making what looks like conscious efforts to get his fist into his mouth — his will is beginning to take possession of his arms and hands.

The first sign of will has been even more intellectual: the child's eyes have clung to a bright object held up before him, and he has turned his head to follow it when it was moved. From the beginning, the child's development shows him to be an embryonic intellectual and moral being, with interests above his stomach. Perez had a disgruntled friend (who must have been a heavy cross to his own wife), who wrote that he could not have believed that any human being could live so entirely for his stomach as did his little son. He said he lived only to eat and digest. Perez — all mothers will thank him — protested warmly that the baby was much more than a feeding machine, and that the frequent meals and many naps were necessary only as a preparation for future activities of a much higher order.

Preyer took for granted what he called the "normal greediness" of the child; but Miss Shinn's "Biography of a Baby" proves conclusively that the child shows from the earliest weeks that he is an intelligent being in the bud, and that very early in his existence, intellectual needs take precedence of physical needs, except such as are strictly necessary to preserve life. If this were not so, how should we be able to quiet a hungry child, or a sick one, by showing him new objects, carrying him about, taking him out of doors, jingling bells and

rings for him to hear? Little as such antics may be accounted intellectual, the appeal made by them is still to the baby's brain, and not to his stomach.

The early period at which the hand begins to fall under the control of the will shows its importance as a factor in education. In the first place, of course, a faculty grows by its own exercise, and every time the baby succeeds in getting his hand to his mouth as the result of desire; every time, still more, that he succeeds in grasping an object, as the result of desire, his will power grows. And not only that, but, as each such occasion brings him new sensations, the brain centers for receiving and recording such sensations grow. As the sensations multiply, relations between them come to be established, comparison is instituted — lo! an idea is born. For this nothing more is actually needed than a brain and a hand, and the nerves and muscles connecting them.

As a matter of actual experience, of course, the eyes, the ears, all the sense organs, play an active part in the stimulation of ideas, but it is an admission of tremendous importance, educationally, that a being without eyes or ears, sense of taste, or smell, with all his body paralyzed except one hand and the vital organs, would still be capable of thinking,— as capable, perhaps, as a being in the same general condition, but having eyes instead of a hand. The order of the thoughts might be different — fortunately no poor beings have yet had to suffer in order to fully prove this point — but in either case, the child would indubitably be a thinking human creature. Laura Bridgeman and Helen Keller, both of them deaf and blind,— shut out wholly from the world of light and sound — receiving their education almost solely through the hand, yet unusually capable of thinking, illustrate the point with quite sufficient fullness.

The child's hand, then, must be regarded from the beginning as the servant of his brain — an instrument by which he carries impressions of the outer world to the seat of consciousness, to be transformed into the inner world; and by which, in turn, the inner world is made to transform the outer world.

However, the lips and tongue seem to be the first organs of touch, not the hands, and for a long time the mouth seems to be also the chief organ of seizing. The baby puts his head down toward his hands to suck at things, instead of raising his hands toward his mouth. He puts things into his mouth more to feel them than to taste them. The monkey uses his mouth as a means of holding things, as we all know, and the baby's proclivities in the same direction make mothers and nurses anxiously search the floor for little things that are dangerous if accidentally swallowed. One sees the little explorer, even after he is old enough to creep, putting into his mouth all the interesting things he finds. Mothers

sometimes needlessly complicate their relations with their children by undertaking to train them out of this "bad habit."

Why trouble to do ineffectually what Mother Nature will soon do effectually? As the hands develop, the mouth will be used less and less; moreover, such experience as the child has already had in the way of tasting unpleasant things, will soon make him as chary of what he puts into his mouth as we adults are. Don't waste your "noes," therefore, but save them for real emergencies. The rarer they are the more effective they will be. In the meantime, let the little fellow have all such experiences as you can permit with safety, no matter how disagreeable it may be to you to see all sorts of queer things go into that rosy mouth — things such as the corner of an old pocket-book, the bath sponge, even the soap. Remember that the child grows by experience, as we do.

Perhaps the first evidence that the child is beginning to control the muscles of the hands and arms is when he obviously tries to get his fists into his mouth. At first they get there accidentally, but by and by — about the beginning of the third month — it is evident that the child is becoming master of the situation, and that he can get his fists to his mouth whenever he wants to.

This brings up the vexed question of thumb-sucking — shall it be permitted or not? Perhaps the safest answer is, that it may be permitted, but not encouraged. It seems to be a natural instinct with all babies, induced, perhaps by the state of the gums — although, to be sure, the difficulty with this theory is that the habit sometimes appears before the teeth begin to give trouble. However, when they do trouble, all children tend to ease the aching gums by sucking and biting on all sorts of things, and preferably on their own fists and thumbs. By itself, there can be little harm in such a procedure, for the hands will soon be so busy feeling and reaching and grasping, that they will not have much time to spare for the mouth; but now, along comes the foolish nurse, anxious for a quiet baby, and puts a rubber nipple in the place of the thumb. Or, if she does not go so far as this, she tucks his thumb into his mouth when he is going to sleep. Presently arrives the day when he cannot go to sleep without his thumb, and yet some one has warned the mother that such a habit will misshape the coming teeth. Then there is trouble — long, painful, utterly unnecessary disciplining. The real culprit is, of course, the mother, and she needs, not discipline, but enlightenment.

I once saw three children in one family all brought up on "blind nipples" and actually deformed thereby. The eldest was five years old, and her teeth were thrust out from her upper jaw until she could not close her lips over them. The constant suction and the pressure of the rubber nipple had drawn the young teeth outward. The next younger, three years old, also had projecting teeth in a degree not quite so marked, and the baby, a year old, showed the same deformity; yet, although the mother had been told by dentists just what caused the disfigurement, all three children wore rubber nipples suspended around their necks by ribbons, and went about in a way that made them seem half-idiotic. She said they screamed so if she took the nipples away that she hadn't the strength to struggle with them.

An important statement in this connection is that of Prof. Preyer. He says that he has proved again and again that a satisfied child does not suck its fists. It is a sign of hunger, or at least, of only partially satisfied hunger. He is speaking of the very young baby; it is doubtful if the rule holds when the child is teething. At any rate, it is of value in judging whether very young babies have had enough milk or not; and it is evident that to give them a "blind nipple" when they are not satisfied with what food they have had, is to give them a stone when they have asked for bread, and, moreover, is to obscure and render useless a valuable diagnostic sign.

But the same objections do not apply to the thumb or the fist. There are a hundred ways in which the child may be weaned from this habit when it has lost its usefulness. In most cases, where it has been left to Nature, and not encouraged, it will never have to be broken in any artificial way at all; and even when foolish nurses have thrust the thumb into the baby's mouth for him, when it was really not what he wanted, but when it served at once to distract his attention and to form a habit of unnatural tenacity, even then, a little vinegar or bitter aloes smeared on the little member will cure the baby's overfondness for it — another case of discipline for the baby, because of the fault of the nurse or mother. One wonders sometimes whether a child who had a perfectly wise father and mother would ever have to be disciplined at all, in the usual sense of the term. He would, of course, in order to be fully and humanly conscious, have to accumulate experiences both agreeable and disagreeable; but in such experiences one is tempted to think there need be none of the peculiar sense of moral tension and hardness that accompanies parental discipline.

The hands have other uses than to be sucked. The baby early uses them to serve the intellectual life. Taine, in a short monograph now rarely referred to, says that his little granddaughter felt about with her hands during the third month, though she could not direct her motions. That is, she must have moved her hands about, still vaguely, seeking to collect sensations. Dr. Seguin says that the smooth, fine surfaces which everywhere meet the inquiring touch of the children of the rich, is distinctly detrimental to their future development. The baby hands should be able to meet a wide variety of sensations, by no means all of them pleasant, if the little brain is to develop the power of making vivid distinctions and, later, of drawing just conclusions.

The average baby does not begin to grasp objects with intention before the fourth month. Miss Shinn's observations go to show that as early as the latter part of the third month the baby may begin to grasp by intention, but without first fixating the object with the eye — grasping by feeling, like a blind person. She describes her little niece sitting at the table, in her high-chair, on the tray of which were placed rattle and ring, and a string of spools.

"This was by the wisdom of grandma," she continues, "who saw the approach of the power of grasping. One may often see the little hands fluttering empty, the little brain restless, craving its natural development (for grasping is much more a matter of brain development, through the forming of associations, than of hand development), when there is no wise grandma to see that rattle and ring and spools lie 'handy by' a little *before* the baby is ready to use them. To wait until he knows how to grasp before giving him things to practice on is like keeping a boy out of the water until he knows how to swim. Such impeding of the natural activities is responsible for a good deal of the fretting of babies."

She goes on to relate that in three days the little hands went fumbling across the tray seeking the objects they had been accustomed to find there, and laying hold on whatever they touched. But the child had as yet no idea of an object that she could locate with the eye and then lay hold of with the hand. She never looked at the objects she touched; she had simply learned that after certain groping movements certain sensations appeared in her hands, and that after movements of clasping and lifting they appeared again in a more interesting form in her mouth. The things she touched could have been to her no more than certain sensations in her own hands and mouth.

It is interesting to note that the grasping by feeling, herein described, seems to be done with the fingers, without any attempt to oppose the thumb. So closely does the use of the thumbs, set opposite the fingers in grasping, coincide with the first grasping by the aid

of sight, that some observers have been led to believe that as soon as the baby learns to use his thumb in this way he has begun to grasp objects with intention — as if the fact of the will entering the fingers made their action more intelligent and perfect. As a matter of fact, however, Preyer found that this use of the thumb is purely unconscious. His boy, and other children on whom he experimented, held objects in this way when apparently quite unconscious of any desire to do so. Preyer calls the action merely reflex — the mechanical result of the cutaneous stimulus occasioned by contact; but one may be permitted to wonder why, at that rate, it appears so much *after* the simpler form of reflex grasping. To the lay observer, it seems much more the result of instinct (inherited intelligence, not the child's individual intelligence) upon the point of being transformed into volitional act. The order seems to be: First, mere automatism — the muscles contracting of themselves in response to nervous stimuli; second, instinct, the inherited wisdom of the race, that race which discovered, ages upon ages ago, that the hand could be used to greater advantage when the thumb was separated somewhat in function from the fingers; third, the child's own intelligence and will, making use of this natural and inherited machinery.

When the child first begins to connect his sensations of touch and motion with his sensations of sight, he has made an immense advance, intellectually. Moreover, when he becomes aware that the sights which have been pressing upon his brain and the touches which have interested him, can be related by certain movements, he is for the first time in a way to get thoroughly acquainted with the outer world. Heretofore, he has been acted upon almost wholly; hereafter, he will himself begin to act upon the world about him — to shape and determine, in some sort, even its action upon him. A creature of environment, to a great extent, he now begins to be the creator of his own environment. Wonderful process! As we watch the baby grow we see the outer world being transformed to the inner world; first, the child spiritualizing matter, changing it to emotion and thought; then mastering it, himself growing greater by each successive act of conquest.

It is during the third month that the baby first begins to look upon his own hands with amazement. Darwin relates that his boy looked at his hands until his eyes crossed. A little later the child thrusts his legs straight up into the air and regards his own feet with great

attention. Soon after, he grasps his foot with his hand and carries it, like all the other things he touches, to his mouth. It evidently does not occur to him for some time that he can move his feet without using his hands for the purpose.

It will be seen that the early shortening of the baby's clothes is really of pedagogic importance. It enables him to get acquainted with useful members of his corporate organization, as well as facilitates the exercise necessary to their development.

Taine tells very prettily of the delight his little grandchild took, at the age of three and a half months, in lying on a rug in the garden, moving her four limbs about for hours, uttering vowel sounds expressive of pure joy and contentment, like the twittering of a little bird. Miss Shinn's niece also, at about the same period, took the greatest delight in the same freedom of movement in the open air, all, apparently, quite without noticing her surroundings, at first, but merely rejoicing in the freedom and the sense of well-being.

At this stage of their growth, children particularly delight in tearing paper into bits, and soon learn to submit to having the pieces that are put into the mouth taken out again. As they are there only to be felt, not eaten, one can understand this submission, which, nevertheless, seems a bit surprising at the time. At this period, too, children begin to throw things, or, more properly, to drop them. This is a great advance over the preceding month, when objects were often dropped without any consciousness of the fact. Now, the child wills to drop, and behold, the thing is out of reach. Then, indeed, he frets to have it again, and the patient mother must pick it up and restore it to him many times. Some babies come under discipline for this proclivity likewise; and indeed, it is a trying stage; but at least once a day, and as many more times as possible, the child should be allowed to play in this manner to his heart's content. He will the sooner live through this stage and come to the point where he can begin to throw. It is just as well that he should not learn that things may be dropped and smashed. The breaking of china and glass is of course a great delight to the child, who feels himself in a very ecstasy of power. What changes he can produce, with a very little effort! But the delight is too expensive. The way to avoid this difficulty is to have a period of play every day when the baby's desire to drop things may be satisfied safely. During the rest of the day other occupations may take the place of this difficult one. It is tact and not discipline that is needed. When to the throwing is added the power of creeping, he will be able to play with himself satisfactorily for hours, and so relieve the relatives who have been patient with him until that time. Indeed, it is true in almost all ways, that the more time and attention, of the right sort, is given to a young baby, the less will need

to be given as he grows older; while the poorest economy is that which puts off the young child, and has to take on the growing boy or girl — substituting for a simple problem a complicated and difficult one.

By attention of the right sort, is meant that attention which helps him to the mastery of his own powers and does not teach him to be dependent upon others. The more unnatural a child's education, the more will artificial stimuli be needed to keep him contented; and this is as true when the education unnaturally restricts his activities as when it unnaturally stimulates them. Thus it will be seen that the nursery axiom that to pay too much attention to a child's wants and wishes is to make him exacting, must be taken with intelligent moderation. There is little danger of spoiling a child at this early period, before the will is fairly awake, by giving him all that he asks for, if he be not taught, by the habitual bestowing of unasked privileges, to expect unnatural excitements. Every possible opportunity should be given the child to exercise his budding powers under the most favorable conditions, even at considerable inconvenience to the adult world. It is years later that he will need to be taught that he must not interfere with the comfort of the rest of the family to satisfy his own whims. He will then be in a condition where he is capable of satisfying his reasonable wants himself; now he is helpless, and dependent for the very necessities, not only of his physical, but of his mental and moral existence, upon the good will and patient tenderness of those about him.

He should, for example, be allowed to feel freely of the objects that fill his horizon. Every possible thing that he desires to touch, he should be allowed to touch. Nothing is falser than that a child should see with his eyes and not with his fingers. Psychologists have proved to us that the sight alone of the natural world, uninformed by the sense of touch, would give us a mental image of flat surfaces merely, with no sense of perspective or solidity. It is by touch that we discover that certain lines and shadows indicate that the object has two or three sides, is spherical, for example, instead of circular. It is by actually moving over the distance which separates us from an object that we discover that certain appearances are the effect of distance, and thereafter associate those appearances with distance, so that when we draw a picture, on a perfectly flat piece of paper, but put in the shadows and lines in a certain way, the picture no longer looks flat, but the objects upon it seem to be receding in the distance. Of course, this fact explains why the baby cries for the moon: he has not the slightest idea that it is far away, and for a long time has no means of discovering that fact. Therefore, if we would have our children see well and clearly — an essential prerequisite to thinking well and clearly — we must allow them to feel things freely.

I remember well a friend's start of horror when she saw me letting my baby feel of a Royal Worcester vase, which had been a wedding present; but the truth is, that vase had never been so well employed. It was an active means of education for all my children. They early learned to delight in its velvety texture and beautiful coloring; and the vase is still intact. Of course, although they felt of it freely, I held it and took ordinary precautions against dropping it. It is noteworthy that a baby who is allowed to feel of every possible thing, so that he has no feeling of desperation when he gets a thing in his clutches — is not afraid of an eternal "No, No!" — is dainty and delicate to a surprising degree in his touch. His fingers move sensitively over the objects he examines, much like the fingers of a blind person. In fact, such a child exercises to the full that "active touch" which is necessary to fine discrimination, and which is impossible to the child who gets most of his new touch sensations by stealth, in constant fear of a reprimand.

Sometimes children are expected to be satisfied with the same old toys and rattles day after day. Now, while it is certainly well that a child should keep a plaything as long as he is interested in it, and that he should be gently encouraged to extend the period of his interest and to make a thorough examination of all the possibilities of each plaything, coming back to it for fresh experiments day after day, still it does not follow that the world of which he can gain cognizance by his sense of touch should be limited to such things as are "good for babies" — that is, too commonly, things that may be conveniently spared by the rest of the family, or that are made for the purpose. Until toy-makers are also educated, the world of natural objects and household utensils will offer the child many more opportunities of developing his powers of discrimination, comparison, and conclusion than can possibly be offered by his toys.

I am very sure that a child should be allowed, and even encouraged, to remain in the contemplation of an object as long as possible. If mothers realized that the baby is really studying when he is sucking, and fumbling, and banging something about, she would hesitate to interrupt him, even to kiss him.

Dr. Seguin insists, possibly to an unreasonable degree, upon the necessity of teaching the child from the beginning to use both hands alike. He reasons from comparative anatomy that those animals which have both sides of the brain equally well supplied with blood have harmonious movements and are ambidextrous. Moreover, he considers that an uneven blood-supply — more blood supplied to one side of the

brain than the other — results in ferocity. Therefore he argues that if man were ambidextrous — if his hands were equally developed from birth and therefore both sides of his brain stimulated to equal activity — he would be at once more skilful and better tempered. He advises young mothers to see to it that their children's brains are equally developed as far as possible, prescribing certain exercises which may help to bring about this result, by giving the right half of the brain more work to do.

We all know, of course, that the left half of the brain is larger and better developed, as a rule, than the right half. Its nerves, crossing to the right side of the body, make us right handed. It is true, of course, that the more a faculty is exercised, the more the brain-centers called upon for the exercise of that faculty are developed. Still, one is surprised to hear him say that, in naturally left-handed persons, the arteries of the right side of the head, and those of the left side of the body, have been found to contain more blood than their opposites.

He concludes from these facts that mothers should correct the natural tendency of their children to lie almost wholly upon the right side; should carry them first on the right arm and then on the left, and, when they make their first attempts to walk, hold them first by one hand and then by the other. In training the hands, it is certainly easy to train both hands at once, up to the age when writing and sewing are to be taught. As a matter of economy merely, it seems well to make both hands useful members of the organism to as great a degree as possible. Nearly all occupations involving the use of machinery require the use of both hands — as does sewing upon the machine, for example, typewriting, and piano-playing. The hand-compositor in a printing shop may work with one hand, but the linotyper needs two. This fact is probably due to the other fact that inventors of machines have recognized in the left hand an instrument of power, capable of being used with great skill, that could be utilized to enhance the value of their machines. If, then, we would have the child able to use machinery as he grows up — an ability constantly becoming more necessary — we will encourage him from the beginning in the use of both hands. Dr. Seguin thinks that brains developed in this way, both-sidedly, would be capable of greater effort and would bear greater strain without injury, than brains where one side is strong and the other weak. Certainly, until the advocates of one-sidedness can show as good arguments, theoretical and practical, it would seem safe to treat both the baby's hands as of equal value.

It is well, in this connection, to bear in mind Prof. Preyer's statement that it is years before voluntary inhibitions of grasping become possible. That is, it is years before a child's will can so overcome his inherited tendency to grasp whatever is graspable that he can keep his hands off an inviting object. Nor does punishment increase this lacking power — how can you increase that which is not? Therefore, the many battles between mothers and children on the subject of not touching things that are forbidden, are, at this stage, a genuine wrong and injustice. No one has a right to leave within the reach of so young a child objects which he must not touch; he is scarcely more responsible for touching them than would a piece of steel, drawn toward a powerful magnet, be responsible for touching it. Commands and spatting of the hands are only fresh bewilderments and pains, and build up a barrier between mother and child where no barrier should be. Put high out of reach and sight things that he really must not touch — or, if necessary, put them away. What joy can the mere possession of inanimate objects, no matter how beautiful, be to you, in comparison with the possession of a vigorous, happy child, all of whose activities you are conscious of having helped and not hindered?

One of the ways in which young children are often tortured because of the ignorance of parents in this respect, is the leaving of undesired food on the child's plate. The mother says, apparently with reason: "Well, my dear, you don't need to eat it, if you don't want to, but you can leave it there until the plates are taken away." But the child frets, and pushes the objectionable dish toward the center of the table; and the mother reprimands, and perhaps there is another unnecessary battle. The real truth of the matter is, as Dr. Dewey once explained to me, that the motor suggestion of the food upon the plate is of such power to the child, that it is as if he were being forced to eat it, every time he looks at the plate.

It may be good to exercise the child in self-control, but not too soon, and not unnecessarily. All society will have to be reorganized before there will be need of manufacturing artificial occasions for teaching a child to overcome his own activities in the interests of other people; the danger now is that the interests of other people will crush out his activities. Certainly, all through the first period of childhood, the one thing for the mother to do is to give her child freedom, and every possible right condition for development.

One begins to see why the great world-leaders so often have been born in poverty. The very fact that their mothers were absorbed much of the time in labor, conduced to the greater freedom of their children. The Child of Nazareth must have had the best and most natural surroundings — in this way, as in all others, fulfilling the law. As he crept about the floor of his home, he must have been able to examine all the objects of the simple housekeeping. In that warm climate, the outer world was well within reach — birds and sunshine and flowers would be a part of his daily experience. Joseph's work at his carpenter's bench, pursued under the same roof, must have brought fresh store of sights and sounds, and presently the incentive to wholesome manual activity. Mary, gentle, receptive, holding herself the handmaid of the Lord, would not obtrude herself against her child's natural wants and interests, but as far as she could in the midst of her work, would serve him, without thought that she might thereby be spoiling him. But her work, constant and necessary, would prevent her from being unduly attentive, at the same time that the simplicity of her life would prevent her from becoming absorbed and nervous. We who would like to have our children show something of his power and nobility, can we not give them something of his surroundings?

THE ORDER OF DEVELOPMENT — *Continued*

After the baby is three months old, there is no question at all about his being an independent person, already beginning to show individual characteristics and variations. Resemblances to this and that relative come and go, and the child exhibits fleeting glimpses of all those who have contributed to his existence. But it becomes increasingly evident that here is a new and special combination of the ancestral qualities. Every mother of a large family knows that babies at this age show characteristics which plainly distinguish them from their brothers and sisters at the same age. Still there are certain stages through which every normal child passes, at approximately the same period. The three-months-old child is usually well able to balance his head, to sit up against pillows or a supporting hand, to seize and grasp objects, to hold out his arm pleadingly when he wishes to be taken, and — as we shall presently see — to use his five senses to bring him a rapidly increasing store of information about the world he has come to live in. He is a busy, active little mortal, working

more zealously than any bee to extract the sweets of knowledge from his surroundings.

From the beginning, his development has been that of a reasoning creature, whose true life and interests are intellectual and volitional. He has, indeed, been very much occupied in sleeping and eating, and these duties will continue to take up much of his time; but they are merely provisional necessities: his bodily life, being necessary to his higher life, must therefore be preserved. But already begins to appear that struggle of the spiritual nature against the bondage of the physical, which increases with the years and which only the widest wisdom and the most perfectly trained will are able to reconcile. The child, at this age, may be coaxed past his meal-time by appeals to his interest in the things about him: he fights against sleep in order to prolong a play-time, determined Mother Nature often pulling him by main strength into the abyss of sleep, while he protests and struggles against it like a creature in the grasp of some alien force.

Although before this time the baby will have made efforts to sit erect, and will have succeeded for a few minutes at a time, when properly held, still he is far from having mastered the difficult art of sitting. The little back that straightens out so bravely has a trick of suddenly collapsing, leaving him hung helpless and boneless over your arm. The average child does not really succeed in sitting alone, entirely unsupported, until the fifth or sixth month. Upon one's lap, partially supported by its shape, he may sit without a hand at his back long before this, and also in his carriage, or in his crib, propped with pillows; but he cannot sit alone upon the hard floor and maintain the attitude for any length of time. Miss Shinn describes a novel contrivance that has been in use in her family for a long time: it is a horse-collar, within which the baby is set upon the floor. A blanket covers it, protecting the baby from the cold floor and the leather of the collar itself. In this novel seat, her little niece was used to sit contentedly, leaning over the low sides of it to reach objects she wanted, and making her first acquaintance with the back of her own head by bending over backward until, to her great surprise, she touched the floor behind her.

There is nothing to be gained by endeavors to hasten the time when the child can sit alone. It is difficult to resist the desire to see the deed accomplished, and the temptation to boast of the baby's accomplishments when talking with other mothers; but this pleasure, innocent as it seems, may be a very costly one for the baby. Aside from the danger of forcing the young bones and muscles to do work beyond their strength, there is danger also to the nerves, for it is as trying to a child, especially to one who comes of an ambitious stock, to be urged too frequently to do that which taxes all his powers, as it is for an adult; and

many a child has had proud admiring relatives to thank for nerves which, in after years, refused to support the ordinary strain of life. It may be taken as a safe and true prineiple that the normal child always exereises all his faculties to the utmost without stimulation. Just as every organ is provided by nature with the instincts necessary to the maintenance of its vitality, so also it is provided with the instinets that insure its normal exereise; and any exercise beyond this point, brought about by artificial inducements, is, of eourse, abnormal, and, if persisted in, is sure to bring about abnormal results.

There is less harm in helping a ehild to ereep than in helping him to sit upright, though for this aeeomplishment, too, the signal must be given by the child's own efforts. Creeping is not a necessity of the ehild's later life, as sitting and walking are, and therefore some mothers argue that it is not necessary that a ehild should learn to ereep at all. Sometimes it seems as if Mother Nature agreed with these other mothers, for she does not insist upon the ehild's ereeping. She urges him gently, and rewards his manful efforts with fresh store of joys, but she is not imperative about it, as she is about his holding up his head, sitting ereet, and walking.

The first efforts toward creeping frequently appear in the bath, when the child turns over and raises himself upon his hands and knees. This leads one to suspect that the ehild would creep sooner if he were not impeded by elothing. Certainly, short light elothes, with few skirts, are a great advantage to him. If he is kept too mueh in the horse-eollar deseribed above, or in any other arrangement to faeilitate his sitting, whieh at the same time prevents him from sprawling freely upon his stomaeh, he will not erecp so early or so well. He should be allowed to spread himself abroad upon a blanket every day for an hour or two, and to get to his knees as frequently as he pleases. It is not in this part of his creeping career that he is to be assisted; here he needs nothing but opportunity.

When he begins to push with his hands, being very desirous of reaehing some coveted object, and finds, to his disgust, that he is going farther and farther away from it, then may the mother quite reasonably interfere. It is no greater tax to the ehild to go forward than backward, and a great rest to his temper. It is very amusing to see a baby vigorously pushing himself away from the thing he wants, and as vigorously seolding at the same time; but, interesting as the performanee undoubtedly is, it must soon lose its charm for the performer. If, when tears are dangerously near the little troubled eyes, a kind hand pushes his feet from behind, he may stop, take the hint, and find himself creeping forward. If he is too tired, he will merely resent the interference and fail to see the object of it, and in this event there is nothing for it but to

take him up, give him, or let him pick up, that for which he has been striving, and coax him into serenity.

The next day, however, before he has begun to go wrong himself, while he is fresh and eager, put your hands behind first one little foot and then the other, and push it forward in the way it should go. Or take hold of the knees and move them for him. The reason why he creeps backward is, of course, that his arms are stronger than his legs and he knows better how to use them. Sometimes this difficulty is overcome by passing a folded towel about the baby's body, under his arms, with it lifting the little arms so that the hands, while reaching the floor, cannot get enough purchase to push back the legs. With this help, he will move his legs vigorously, and get some idea of what he is to do with them.

The creeping period is a trying one for the young mother, who has rejoiced in the dainty sweetness of her baby. Heretofore, his little hands have been exquisitely clean and fine, with nails like bits of the most delicate seashell, and his clothes, prepared with loving care, fit wrappings for his little body. But now his hands grow grimy; it is impossible to keep his nails clean; all sorts of unsuitable things, many of them none too clean, are tested by his inquiring mouth; and the pretty clothes are tumbled and soiled. For this reason, many mothers do not encourage their children to creep, and either haul them up from the floor in spite of scoldings and protests, or endeavor to confine them to a comforter; or imprison them in a baby-buggy or chair. Even progressive books on the care of children recommend little railed-off spaces, lined with a comforter, in which the baby may safely disport himself.

All such expedients and restrictions ignore the real significance of the creeping period. It is not a physical necessity to the child, although it has its value in strengthening his legs and arms and exercising his muscles generally; but it is preëminently a necessity of his intellectual life. He has reached the stage where he desires to know more about distant objects — he is just beginning, in fact, to get an idea of distance, and — as has already been hinted — this idea is absolutely necessary to true seeing.

The idea of distance seems to rise from repeated experiences of the amount of effort required to reach an object that presents a given appearance. Besides acquiring this fundamental notion, he gets others,— ideas of hardness, softness, height, length, breadth, thickness, smoothness, roughness,— in short all the varied qualities which go to make up objects as we know them. To restrict him to a specially-prepared corner, however safe and convenient for the mother, is likely to limit the material from which the child is constructing his future power to think. Save when the house is exceptionally draughty, and the child excep-

tionally delicate, he should be allowed to creep about freely, shielded from the fire by a strong fender, and with no hanging tablecloths within reach. In properly-warmed houses, he may even be allowed to creep into the halls and to explore the other rooms. Trying as this period is if one attempts to evade it, or fails to perceive its significance, it is full of interest and of new freedom for mother and child if properly understood.

Of course, he must be clothed in a suitable fashion, and the mother must resign herself to admiring his hands during sleep — the only time when they will stay clean; from this time on, if he grows as he should, only on rare occasions will he satisfy her ideas of cleanliness. Of course, he should be bathed all over every day; he should be clean when he sleeps, and preferably when he eats; and for the sake of his mother's credit in the community, he may submit to having his face washed before going out of doors, though it is bad for his face; but the rest of the time he should, in all fairness, be allowed to get as dirty as necessary. Other things being equal, it may safely be affirmed that the baby who is always immaculately clean will grow up to be a weak-minded man, his intellectual development having been sacrificed to his mother's ideas of neatness.

But, although his hands and face must, all through life, be exposed to the weather, and show the disfiguring effects of contact with hard facts, a little ingenuity may protect the clothes. And this is well, for it is much easier to wash hands and faces than fine cambric and flannel. Mother Nature has covered the child with an exquisite fabric, woven past the skill of our best looms, which nevertheless will stand a vast amount of wear and tear, and, when soiled, is easily restored to cleanliness. Not so the clothes; unlike the skin, they do not take kindly to even necessary usage, and they are difficult and expensive to wash. Hence the time-honored "creeper." This may be made of any dark, durable cotton goods, indigo-blue calico with little white spots on it, trimmed with white feather-braid, being perhaps as satisfactory as any other. It should be made a half yard longer than the short dress. The lower edge is drawn into a band the size of the child's waist, with a plaquet in the middle of the back breadth. When the garment is worn, it is put on over the dress and all the other clothes, the extra length being drawn up under the clothes and buttoned around the waist, thus incasing the underskirts as well as the dress in a sort of bag of blue cotton, and leaving the little knees comparatively free.

The difficulty is, that it also draws the clothes away from the body, and does not sufficiently protect the child's legs and lower abdomen. To avoid this difficulty, as well as to protect the stockings, a little pair of black worsted tights should be drawn on, covering the legs to the

ankles, and coming well up to the stomach. If tights are not easily obtainable, knit drawer-leggings will answer the purpose, or a pair of tights may be manufactured from cast-off parental undergarments, dyed black. At least three pairs of tights and three creepers will be required.

In this armor, he may freely roam about, his only real dangers being the lamp and the fireplace. I have already suggested the way in which the fireplace or stove should be guarded with a strong fender, but while this precaution is obvious, few mothers realize, until taught by dire experience, what mischief may come from a long cover hanging from a table on which is a lamp. The dining-room tablecloth, temptingly within reach, may endanger the table-china, but the bedroom or parlor tablecloth may be a real menace to the baby. Why not put them away until he is a year older, and use doilies instead?

And now the stairs. Many's the gate that has been swung above them, many the temper lost in trying to keep them shut, and many, too, the baby fallen downstairs in spite of them. The problem may be simply met by teaching the creeping child how to use the stairs. It is not at all a difficult thing to do. Start him at the head of them, and, yourself below him, draw first one little knee and then the other over the step, thus showing him how to creep down backward. Two lessons, of from a quarter to a half hour each, will make him master of this not too difficult art, if he has already learned to creep; and thereafter he is master of the stairways. The only danger is in creeping down headforemost, but if he once learns thoroughly to go backward, and has not been allowed the other way at all, he will never dream of trying it. In going down backward, if he should slip, he will simply slide along on his little stomach, an unpleasant proceeding, but not at all a dangerous one; moreover its very unpleasantness teaches him to save himself by catching on to the stairs with his hands as he slides by, thus quickly arresting his downward career. When babies have been taught in this manner, the stairway, instead of being the mother's dread, becomes her ally, and amuses the child for hours together.

The climbing instinct begins to appear about this time, and, while the stairway satisfies it to some degree, still the baby seeks other fields of activity. He pulls himself to his feet by every available projection, undeterred by the abrupt fashion in which his unsteady legs decline to support him longer and bump him into a sitting position, without the least regard for his feelings. He pulls light chairs over upon himself, and

woe to any unsteady table with which he comes in contact. It is another trying period; but, like the creeping period, it is less trying if one faces it and recognizes what it means to the child. He should be allowed every possible opportunity to obey this instinct. If you put out a hand to him, hold it steady and let him pull upon it as he does upon a chair-round. He will like it much better than being caught into the air, kissed, and set upon his feet. If he could speak in our language he would tell us not to bother him with such distracting performances when he is occupied with the serious business of life; as it is, he speaks in his own language, fretting, and tossing his legs and arms. The appeal of his struggling weakness is great; one yearns to lift him; but he should be suffered to lift himself.

The child who creeps is often later in his attempts to walk than the child who does not. This is to his advantage. When he is ready to walk, his legs will be all the stronger, and the danger of bowlegs will be past. Other things being equal, the more thoroughly a child exhausts the possibilities of each stage of development, the more thoroughly is he laying the foundations for the later stages. Thoroughness of living, however, must not be confused with tardy or arrested development. The vigorous, active child who hitches or creeps across the floor with great skill and energy, and is so proficient in that exercise as to tardily perceive the need of any higher form of locomotion, is a very different being from the under-developed child who creeps languidly about and has not the energy necessary for walking. The time when both children — the delicate and the vigorous one — begin to walk may be the same, and both may be equally satisfied with creeping as a means of locomotion, but the causes operative in the two cases are exactly opposite. In neither case, however, should the child be urged to walk; the delicate child would certainly be hurt by such urgency, and the strong one would miss something of what he is still managing to get out of his creeping. As long as a child remains satisfied with creeping he is not yet ready, either mentally or physically, for walking.

The physiological psychologists are mightily puzzled over the reason why the baby, when held erect with his feet touching the floor, makes walking movements with his legs, apparently without in the least knowing what he is doing. The puzzle is whether this is a reflex movement, set off when the proper time comes by the mere touch of the floor upon the soles of the feet; or whether it is an instinctive movement. Instinct, you will remember, is inherited memory, and it may well be that the baby's organic memory, impressed, as it has been, for millions of years, with the importance of such movements, may initiate them before his higher brain centers, the seat of consciousness, become at all aware of them. However all these fine theories may be, the fact remains that the

child held from above, will move his legs as if walking months before he is really able to walk.

If a child has been allowed to climb about freely, he will soon be standing. The delight of pulling himself to his feet will make him do it again and again. He will next begin to sidle around a chair, not walking, but shuffling his feet sidewise in a vague, uncertain sort of fashion. Every now and again, standing so, he will need both of his hands to seize some coveted object, possibly lying on the chair, and he will stand without clinging, generally leaning on his little stomach. An unhurried child will remain at about this period of advance for weeks, sometimes, while his young aunts and all his interested relatives, including, be sure, his mother, long to be able to report progress, and to announce that he can actually stand alone. Therefore is he set in a corner, like a puppy learning tricks, and bid to stand; but lo! he limply collapses, like the puppy. Try him now with something to attract his attention in your hand, held a little above him; he will stand without knowing it. And it is exactly this unconscious standing that ought to be strengthened.

It is almost an educational axiom that the more activities are permitted to take place below the threshold of consciousness, the more room there is left above the threshold for the complicated activities of later life. When a musician has so mastered his instrument that he plays without thinking, that he transposes from one key to another unconsciously; when a typewriter has mastered her scale and writes without consciousness of the keyboard; when a woman, sewing on the machine, follows the hem on the right side without noticing how she does it; or a man casts up columns of figures in a ledger without thinking at all, merely moving his pen up the page; then these activities have been committed to forces that work below the threshold of consciousness, and there is obviously more room above the threshold for other activities.

When the musician laboriously picks out his notes and carefully thinks out his fingering, he has no time for interpretation; when the typewriter is hunting her keyboard for the desired letter or punctuation mark, she has no time to think of the beauties of style, or to put any but the most primitive thought into what she is writing; when a woman, sewing, has difficulty in moving the treadle evenly, and breaks her back and her eyes trying to keep to the edge of her hem without running off, she has no time or strength for careful designing of garments; when a man, in casting up his accounts, has to go over every column, in sections, from

below up, and from above down, and then isn't sure, he is in no condition to think out a progressive business policy. So in all occupations — the more work we can get out of the mechanism of our nervous systems, the freer will the voluntary and conscious parts of our brains be to perform the work which they alone can do.

The first unconscious standing and moving about, then, should not be disturbed or made conscious. The mastery of the mechanism of walking may well be left from the beginning to those unconscious agencies which will presently be called upon to control it for life. The child, let alone, will walk without knowing how he does it. He will be the stronger for having overcome his difficulties himself. This does not mean, however, that he should not be allowed every desirable opportunity to exercise his growing powers; it does mean that he should not be coaxed and persuaded to walk. The normal persuasion is in the world around him, which continually entices him to its mastery; other persuasion is forced, and may urge him beyond his strength.

Walking-chairs and baby-jumpers are injurious in this respect. They keep the child from his native freedom of sprawling on the floor, pulling himself up, climbing, and investigating; and confine him to an artificial activity, less varied and healthful.

Preyer remarks that those children who have elder brothers and sisters walk earlier than those who have not. Imitation helps on this precocity, but it is also brought about by the direct efforts of the other children; the baby is hauled about between two of them while he is, as yet, quite unable to support his weight himself; or he may be seen held by one hand, limply lopping over to one side like a rag doll. Often, he meekly submits, because of that strange joy that even babies feel in the presence of their peers; but when he does begin to protest, his objections often go unheeded. Sister coaxes; brother, in a voice like papa's, bids him be a man; mother, from her work in the next room calls out "Children, don't tease Baby"; and that is all the satisfaction he gets, until at last he fairly bursts into tears. The only harm in all this is that he has been urged beyond his strength; he has passed the point of normal fatigue; he has laid another little track for misdirection of nervous energy; a perfectly normal process of growth has become to a slight degree abnormal. Fortunately, a brief nap repairs damage this time — and the next. But how about the hundredth time?

The baby-buggy, that blessing of infancy, often becomes, at this period, a bugbear to mother and child. Having learned to walk, he does not want to ride; yet his brief strength will not carry him far. Who has not seen a year-old child fighting valiantly with the strap binding him into the hated comfort of his carriage, screaming with anger, while a flushed nurse or mother trundled him rapidly home? It is, indeed, a difficult situation, and to it many a child owes his first spanking; but it is not at all a case for discipline, but for management.

The child is totally unaware that he is naughty, and no amount of telling him so will help the matter. Suppose you succeed, as you easily may, in making him understand that you are angry, and will continue to be so if he continues to cry and struggle, what then? Is this a valuable and helpful bit of knowledge for the young, impressionable brain? He is not nearly mature enough to reason with himself that it would be better to stop fussing, and mind mother, because he will get hurt if he does not; he has not yet reached the stage where such reasoning is possible. He may stop, at the sound of a loud, sharp command; but it is not because he is thinking or understanding, but because he is frightened, and in the rush of the new and overwhelming emotion the desire to be free disappears. Poor little one, struggling with the unnatural barriers of a civilization not made for children, struggling as he has had to struggle ever since he was born; what a pity for him to make the discovery that his mother, too, is against him!

He will not be "spoiled" if you take him up, set him upon his feet, let him grasp the handles of his buggy and wheel it along in front of him, his legs dragging bravely after. You will need to keep a restraining hand upon the handle, out of sight, or he will push beyond his power to follow, and be fretted again. You cannot hurry much in this condition, nor can you take him for a long ride; but be patient, plan little leisurely outings; the situation will change in a week or two, and then your boy will be less zealous about his walking, having become accustomed to it, and will allow himself to be put into the buggy when he is tired. He will do this without any trouble at all if he has never been permitted to feel that his buggy is a loathed prison, from which escape is difficult, but has always found it a place of rest and refreshment, to be easily abandoned when ready for more deeds of valor.

When he has become too tired, he may fret, but the mother should have provided for this emergency — the price of a good baby is eternal vigilance — and have ready a favorite toy — kept out of sight up to this moment — or a bit of biscuit to distract his attention as he is lifted in. Do not say persuasively, "Doesn't baby want to get into the carriage now? Here is Dolly. Poor Dolly wants to go to sleep." The chances are he will say no, and you will have to wait a little and try again. By

the time he is so tired you cannot wait another minute for him, your inducements will have lost their value, his fatigue will have made him fractious, and you will conclude that the new methods are all wrong and that a whipping is the only true remedy. Watch for signs of fatigue, saying nothing. Do not ask him a word about it, except with your eyes. As he begins to grow tired, pick him up, put him quickly and cheerfully into the buggy, as if never dreaming of objections, and give him the doll, or whatever you have. And exercise a little ingenuity: if he has Dolly one day, let him have a biscuit the next, or a woolly dog; or some other object that he does not expect to see. Thus you will have the element of surprise to help you over the dangerous place.

You will notice that this is a new warning — the warning against allowing the child to get overfatigued with his own activity. In the last six months of the year, the child has reached a stage of development where it is very possible for him to play too hard and too long; and this is especially true when he is roused and excited by the wonderfully larger and more interesting world he begins to know as he gains the power of walking. The delight of exploring it fairly intoxicates him, and the mother must be on her guard constantly against overfatigue. There is a point at which a tired child welcomes relief; once beyond that point he fights it. In this he is, of course, like nervous adults who are both unwilling and unable to take the rest and quiet they need. He will become one of these tortured mortals himself, if he is allowed to habitually overpass the limits of normal fatigue. The regularity of his hours of eating and sleeping is now established, and is his safeguard. They constitute expected and necessary breaks in his active day, and save him from over-use of his budding powers.

So rapid is the development of his senses during this period that the child, after a very few months, has gained a keen discrimination of sweet and sour and bitter, of temperature, of smooth and rough, of soft and hard, of light and heavy, of pleasant and agreeable things, sensations, and even persons, and all this knowledge and its accompanying intellectual development is made without any knowledge of words whatever — even of the speech of others.

"The first act of the human intellect consists in the ordering of impressions made upon the organs of sense — upon the skin first; then upon the eye," says Dr. Preyer. Scientists call the arrangement of all these impressions in their relation to each other, "space." It is the knowledge by which we locate the objects, the impression of which the eye carries to the brain. The baby sees a toy upon the floor, he also sees the bed upon which he is, but, having no knowledge of the distance between, he crawls to the edge and reaches down. Repeated falls are necessary to make him realize the proper space relations. Blind persons,

whose sight has been restored, have to learn this lesson just as the infant does.

It is through the same knowledge, gained by the senses of touch, taste, and sight, by repeated failures to seize objects, and through the gradual perception that they become brighter or darker when nearer or farther away, that the difference of form and size are learned. What the eye does in order to perfect a knowledge of space, the ear does in order to cultivate the knowledge of time.

This begins to develop with the child's first perception. When he perceives an object with any clearness, he uses both his sense of space and his sense of time, and already his development has reached a point when his senses stir his intellect to action and his spirit to emotion. This development may be followed, step by step, noticing how the groping senses, discovering the facts of life, report them to the brain, where the intellect analyzes and classifies them, forming conclusions, and storing experiences; how the spirit takes up the results obtained by the intellect and extracts therefrom the elements of its own growth.

For mothers, a knowledge of this process is chiefly valuable for the plain conclusion to which it leads: that there is a vital connection between the three parts of the child's nature; that therefore to develop the senses is to develop both mind and soul; so that no act of the child's training can be without its effect upon both intellect and character.

This is as true of the social environment in which the child finds himself, as of the natural environment. Being the child of humanity, he feels and responds to social ties. Very early he shows fear of being alone, and his delight in companionship is unmistakable. Society is then another of his active educators: through the stimulus of other minds, and the impulse of imitation he gains an immense share of his knowledge of life. Froebel attributes the child's innate love of a large gathering to the dim sense that there is a common ideal toward which all humanity is striving, and which wakens in his soul a longing to share the universal effort. This he believes to be the beginning of religion.

This beginning may well be followed up by impressions of the visible world of nature. Flowers, birds, trees, skies, and the natural objects which were the teachers of the race in its earliest gropings for spiritual knowledge, will best teach the child also.

The spiritual reaction of this sort of education is love, and very early there must be dim preferences and approvals which lead to the development of the love of noble natures and to imitation of them. In his helpless first stage of life, blind, deaf, speechless, dull alike to pain and pleasure, only the love-anointed eyes of the mother can see the beginnings of the spiritual affections. To her they are plain from the first unfolding of consciousness, and perhaps this belief, which no

scientist will adopt, is of nature's highest wisdom. It prompts the mother to lavish affection upon the baby and to constantly urge him to a response, which is the natural way to develop these highest attributes of the soul. Certain it is that he does respond very early, and that in a few months his power of loving is stronger, more definite, and more often expressed than is any other emotion. And is it not likely that the young soul unfolds its powers more rapidly and naturally through this stimulus than through all the others combined?

RELATION OF GROWTH TO MENTAL DEVELOPMENT AND CHARACTER

CONFINING their observations to their own children, mothers are often ignorant of what should be the average rate of growth, and the average weight, height, and proportions of the body, for a child at any given age. They should certainly not remain indifferent to this branch of child-study, for they can scarcely expect to keep their own children within the safe limits of normal and healthy growth, when they do not understand what these conditions really are.

Many persons suppose that a child who is beyond the average in size and weight and physical development generally, has a great advantage over those who are less precocious. There are other persons who will tell you that the undersized, active, and nervous child has the better mind, while some recent scientists claim that, other things being equal, the larger body goes with the more vigorous mental powers.

Upon discussing these conflicting theories with teachers, it was found that experience justifies them all, some being able to point out numerous dull and stupid big boys and girls, and as many undersized and physically frail who were, as generally described, "quick as a steel trap." In institutions for older pupils, some teachers proved one theory by pointing out "honor men" of frail physique, and others the opposite by citing college athletes who were also exceptionally fine classmen.

There are also, of course, many influences and many things in school and at home which tend to retard mental development, or pervert it, without affecting physical growth. With these things in mind no mother will expect that it is sufficient to keep a child up to the average of his age in weight, height, and proportion, but she will see that if she can do so she will provide the best conditions for physical growth. The tables

given here are probably not absolutely correct for all localities, and a child may vary from them without being abnormal or unhealthy, but a general idea can be gained from them of what a normal child should be physically. It is also well to know something of the rate of growth, something of the processes, and, before either of these facts, how much "growing" must be accomplished between birth and maturity — not exactly how much must be gained in weight and height, for this varies, but just what changes of structure, proportional dimensions, and what increase in powers must be provided for.

There is a popular idea that all the organs and their functions grow along together at an equal rate and with regularity, while the truth is that some organs grow at one period, and then suddenly, without apparent reason, cease to do so for a time; while some of the decided changes through which the body of the child must pass, go on regularly and constantly. We are prone to think of the child merely as a smaller copy of the adult, differing only in size. The truth is that even in his physical structure he is of another pattern. The proportions of the body are quite different, and a man built as a child is would appear very grotesque, with a huge head and abdomen, and short limbs.

The amount of mineral salts, and the percentage of water in a child's body, are as different as the relative weight and size of the organs. He has a much greater proportion of muscular tissue than the adult and a smaller amount of tendon. His respiration is very much more frequent, varying from a rate of thirty-five per minute in the infant, to twenty at twelve years of age, and sixteen at maturity. The proportion of mineral salts in his cartilages increases from two and twenty-one-hundredths at six months of age to seven and twenty-nine-hundredths at nineteen. The whole bony structure is much more vascular than that of man. The skull differs greatly in shape and dimensions, as one may observe, and the structure of the brain within it shows even a greater divergence from the adult type. At birth, the convolutions are very dimly mapped out upon the brain surface, but in the first eight years of life they become rapidly more distinct, and the brain not only grows in weight and area but changes materially in structure. In the beginning it is made of cells which seem to be separate and individual, but as the functions of the brain develop, these cells "bud and branch and interlace like the fine roots of a plant"; a similar branching and specializing goes on in the nerves; so that with every hour of his existence the child seems to be very busily preparing for a fuller life.

The vertebræ show equally interesting changes, and their proportions differ greatly between infancy and maturity. Many organs, as the eye, and the eustachian tube, undergo growth and change; both the lungs and the heart develop considerably from their infantile shape, powers, and

position; and the outward form of the chest undergoes a corresponding change. Dr. Nathan Oppenheimer, from whose work on the "Diseases of Childhood" most of these facts are gathered, remarks that "all in all one may say that the containing space, the relations, and absolute positions, and the form of the youthful heart are plainly different from what they are at maturity." He concludes this particular chapter by saying that "a full account of all the slow changes that make the child so widely different from the adult would of necessity bring in practically every element of physical and mental growth." The child "is not a fully formed being, his development is not a rigidly immovable process; each progresses toward fruitful maturity slowly and irregularly"; and "the unstable equilibrium which perforce exists, demands intelligent and sympathetic care for its conservation."

We mothers rather depend upon the teachers to give this care, and though they have, on the whole, carried out their obligations much better than we have discharged ours, still every child is so far from having the very best conditions of development provided him, that it seems we may have to share the responsibility with teachers. Having learned something of the vast meaning of this word growth, as applied to children, we must see many ways in which the mother, by care or mismanagement, may favor or retard it. Since there is no period especially set apart for the growth of the more delicate organs and functions, we must conclude, in the first place, that the whole course and period of growth should receive equal attention, but there can be no time of relaxed care, no drains upon the vital force, no overstrain of school work, and no illnesses, that may not work serious and lasting injury. We must also see that though the child does not develop symmetrically nor regularly, there is no period when the mother would dare to rob one set of functions, or one line of development, in order to hurry another. To the thoughtful mother, Dr. Oppenheimer's statements emphasize the interrelation of the child's physical, mental, and spiritual nature, and make clear the absolute necessity for a balanced development. In this light, precocity is seen to be a menace and its encouragement a sin.

It must also be clear that in this constant change and flux of all his powers, every moment and every experience of the child's life is of value, and though in this general activity much that is valueless and much of worth may be thrown off, and its influence missed, yet at any moment a deep and lasting impression may be made. This is true of the mind and the character, and it is also true of the nervous system and physical nature. It is of awful import to those who have the care of children, and should induce them to be always on the alert to secure the best conditions of growth.

In communities where children are not weighed and measured at school to show their divergences from the normal, it is often of use to

mothers to know what the average weight, height, and dimensions of a healthy child should be. And by comparing their own children with these general measurements they are able to keep informed as to their physical condition.

The first of the subjoined tables is called Quetelet's Table of Average Heights and Weights, and is found in the work of Dr. Oppenheimer, referred to in the foregoing. The second is compiled from the report of the U. S. Commissioner of Education for 1899.

It is suggested that mothers of children who fall below these averages need not suffer great anxiety thereby: in the first place anxiety is always a serious drawback in the management of children, in the second place hereditary tendencies of size and weight may influence the showing, so that the child may be perfectly healthy, and not reach the figures given in either table.

Quetelet					U. S. Commissioner of Education		
Age	Weight lbs.	Height in.	Chest in.	Head in.	Age	Height in.	Weight lbs.
Birth (boys)	7.55	20.6	13.4	13.9	5 to 6 (boys)	44.69	45.24
" (girls)	7.16	20.5	13.	13.5	" " " (girls)	44.23	43.33
1 year (boys)	20.5	29.	18.	18.	6 to 6½ (boys)	44.75	45.31
" " (girls)	19.8	28.7	17.4	17.6	" " " (girls)	45.09	45.74
2 years (boys)	26.5	32.5	19.	18.9	7 to 7½ (boys)	47.83	51.47
" " (girls)	25.5	32.5	18.5	18.6	" " " (girls)	47.44	49.44
3 years (boys)	31.2	35.	21.1	19.3	8 to 8½ (boys)	49.74	56.19
" " (girls)	30.	35.	19.8	19.	" " " (girls)	49.13	53.67
4 years (boys)	35.	38.	20.7	19.7	9 to 9½ (boys)	51.70	61.54
" " (girls)	34.	38.	20.5	19.5	" " " (girls)	51.20	58.55
5 years (boys)	41.2	41.7	21.5	20.5	10 to 10½ (boys)	53.19	66.26
" " (girls)	39.8	41.4	21.	20.2	" " " (girls)	53.14	64.19
6 years (boys)	45.1	44.1	23.2		11 to 11½ (boys)	55.14	72.73
" " (girls)	43.8	43.6	22.8		" " " (girls)	55.78	73.20
7 years (boys)	49.5	46.2	23.7		12 to 12½ (boys)	56.76	79.38
" " (girls)	48.	45.9	23.3		" " " (girls)	57.91	81.85
8 years (boys)	54.5	48.2	24.4		13 to 13½ (boys)	59.14	88.27
" " (girls)	52.9	48.	23.8		" " " (girls)	60.24	93.02
9 years (boys)	60.	50.1	24.5		14 to 14½ (boys)	61.79	100.95
" " (girls)	57.5	49.6	25.8		" " " (girls)	61.65	100.38

These tables are quite an interesting study, and one naturally speculates upon the variations of the proportional weight of boys and girls at different ages. The conclusions drawn should be both helpful and convincing; for instance, the rapidity with which the girls gain upon and pass the boys at the ages of eleven to fourteen, which mark the beginnings of adolescence, should show what has so frequently been said, that Nature's demands upon the vital force of girls at this period must be quite great enough to absorb it all, and the additional strain of increased mental labor in the advanced grades and high school must be at the cost of healthful development, in all other respects. We see that in the building up of tissues and increase of height, weight, and girth of chest, nature is usually active in addition to the functional changes, and the development of the emotional nature which we know to be going on at the same time.

Yet we are not to conclude that the period of adolescence should be one of special care to girls only, but to understand that girls and boys require a different treatment. The rapid increase in height and weight, which are accompanied with lassitude and nervous restlessness in girls, point out the need for calm and restful surroundings, freedom from mental strain, and gentle physical exercise. The old-fashioned notion that this is the time for the girls to take a share of household duties and to learn housekeeping arts has much to recommend it, for it is precisely this kind of light, regular, constant, and interesting activity that nature seems to require. Boys, on the contrary, have a natural craving for a fuller, more exciting and active physical life than ever before. They seem to be stirred by the sense of developing power and to be forced to manifest it. So for them this should be the period of the gymnasium, the workshop, the vigorous games, the mastery of animals and physical forces — the braving of the weather, the conquering of mechanical difficulties, and the general delight and glory of "doing things." Every boy who can have the farm life at this season has ideal conditions of development.

The rate of increase of growth from year to year seems to be tolerably regular, so that we may suppose that a healthy child should show about this amount of progress. When he falls below the average increase for his years, his mother should conclude that he is not in the best physical condition, and should investigate home life, school life, work, play, food, and all other influences for the cause.

In securing a perfect physique for her children, the mother will find great help in their own ideals of physical perfection. Whether the mind has really some occult power to mold the body, or whether it unconsciously controls the muscles and supports it, through them, in the most favorable positions, need not be a question of importance to her; she

understands at least that if she can give her children a warm and lively admiration for physical beauty, they are much more likely to attain it thereby. Of course this ideal of beauty must be founded upon health.

Children should never be taught to worry about their health — to "take care" of it in the popular sense, full of constant fears, and conscious of the slightest disturbance of it — but they should be taught to have a sort of conscientious respect for the rules of right living, and should be taught to feel a certain pride in health and strength. It does not always seem wise to preach to them about the deleterious effects of rich foods, sweets, and dainties, but they can be influenced to take a wholesome pleasure in hearty food, if parents set that example, and refrain from eating the things which merely please the palate and seem desirable because so often forbidden. Even greater than the effect upon the health is the influence of a serene and cheerful state of mind upon intellectual development. Worries, and fears, and discontent, absorb a great deal of nerve force; and while the reaction from them is much quicker and more complete in young minds, the habit finally overcomes the reactionary power and the mind settles, as it were, into grooves of independent thought.

When the general health is good, the nervous system properly balanced, and the intellectual development proceeding in an orderly and rational way, there is no reason why the moral nature should show any discordance with the general symmetry of growth. And since the relations of body, mind, and spirit are so close, and so mysterious, it would seem a safe and sensible plan to secure all the proper conditions for physical and intellectual development, in perfect confidence that the moral nature will keep pace, and need no other care than virtuous surroundings and example.

KATE E. BLAKE.

THE NERVOUS SYSTEM AND ITS RELATION TO MENTAL DEVELOPMENT

BETWEEN the physical system and the mental faculties there lies a little-known region called the nervous system. It might be a task simple enough to nourish and care for the body of a child and to inform his mind, but this mysterious third claimant upon the attention and care of the mother — this nervous system which is so difficult to understand — is always interfering to destroy the effect of proper food and care for the body, and proper instruction for the mind.

This wonderful telegraphic system, elsewhere briefly described, gives evidence of its power and nature from the beginning. It shows

itself in sensitiveness to light, sound, and warmth; in activity, attention, and responsiveness. In its general characteristics it makes up what we call temperament.

Dr. Preyer accepts the time-honored classification of temperament as sanguine, phlegmatic, choleric, and melancholy, and thinks it of practical importance to be able to distinguish them quite early, within the first half of the first year of child life. The benefit of this knowledge to the mother would lie in her ability to adopt a course of training that would supply the defects of one temperament with the virtues of another, the ideal being, of course, a combination and modification of them all.

No doubt such a course might at the same time change or remedy physical peculiarities or defects which help to determine temperament. Nervous sensitiveness to impressions, and the duration of the effect of each impression, vary with variations of temperament. In the choleric and sanguine the excitability is very great, but the impression is deepest with the phlegmatic and with the melancholy. It seems that with the two last mentioned, the organic change which impressions make in the brain is considerable, so that a real physical difference in the brain itself is both cause and effect of these temperaments.

Few children present a clear type of any one of these varieties; most of them combine two or more. The child of sanguine temperament that turns its head at every noise, and starts nervously, shows many fears, is restless, not long interested in any one thing, cries a great deal, and wants to be changed from place to place, should be very carefully guarded against excitement, too much attention, and overstimulation of any kind. In his earliest infancy he should be kept from premature excitement of the senses; the room where he lives should be pleasantly lighted, quiet, and of an even and moderate temperature.

The slow, placid, contented baby may be much more safely made the family plaything and the object of experiment. It is the quick, responsive, easily stimulated children that are the victims of parental and pedagogic vanity. It is so easy to push them forward, to induce them to distance other children of the same age, at school, and in the study of music, that they are constantly stimulated to an over-excitability of all their faculties.

Precocious children are always of a delicate, nervous organization, and anything that encourages precocity, overstimulates their nervous system. Carefully gathered statistics show that "only" children are generally just such delicate, over-responsive, nervous, showy, and superficial children as one might expect. And no doubt the reason lies in over-attention, "over-coddling," and a worn-out nervous system.

Parents of such children must choose whether they shall show superiority over others in childhood, or in maturity. If they mean it to be maturity, they must conserve the undoubted power of precocious children, they must give them a quiet, even, balanced development; must concentrate their efforts upon forwarding the physical rather than the mental development; and not excite or stimulate the too sensitive nervous system.

The reverse of precocity is stupidity, which is characterized by the lack of what psychologists call "motor activity." The child whose brain power is below normal gives little evidence of mental activity; he is unusually sluggish and irresponsive, he has a tendency to remain shut up within himself, shut off from sympathy with companions and surroundings. This condition may be produced, or increased by slight, unsuspected defects of sight or hearing. It may also arise from improper nourishment, want of proper sleep and exercise, mismanagement, and unnatural repression.

Almost every nervous and sensitive child develops sooner or later some habit of speech or manner which indicates an unhealthful condition of the nervous system. Sometimes this warning is given in the weakness of certain small muscles — in the trembling of the hands, the uncertain grasp of the fingers, the twitching of the mouth, or the "batting" of the eyelids. Sometimes it affects the tones of the voice, the enunciation, or produces drawling or "stuttering." Sometimes the child bites the nails, or "sniffles," or carries the head too far forward, or drags one foot in walking, or falls into any one of the numerous habits which an unbalanced nervous system produces.

In the case of any one of the habits which indicate the want of balance in the nervous system, it is easy to do great mischief by discussing it before the child, by magnifying it, or by in any way calling attention to it. Everything that arouses the association helps to fix the habit, and it is but reasonable to insist that to cure the defect nothing must be said or done to keep it before the child's mind in such a manner as to deepen the impression already made. "Nagging" in such cases is little short of criminal. Most of these habits will yield to judicious mental suggestion or physical training, especially if careful thought and patience direct the treatment. A little thought, a little study, careful consideration of the child's temperament, and a large amount of patience, is the formula to which most of these objectionable habits will yield.

Through constant association, many mothers are slow to detect failing energies in the child. For instance, there is a popular belief that children are naturally heedless, and a widespread habit of addressing them in a loud voice and repeating what is said to them as if the normal ear in childhood were naturally a little dull. These things help to prevent parents from detecting slight defects of hearing.

Defects of hearing may be caused by various simple and easily cured diseases; adenoid growths in the nostrils, and diseased tonsils which are exceedingly common among children, may impair the hearing; some children's diseases cause a thickening of certain membranes of the ear; and physicians point out a number of other causes. They are beyond the power of any non-professional to detect or cure, and therefore, need not be further described. It is a mother's duty to take the child to a competent physician for examination, as soon as she has any cause whatever to suspect a defect of hearing.

AT SCHOOL

Since the responsibility for the proper development of the young must always lie with parents, they must hold themselves as the court of last resort at which all educational systems come for the final trial. They cannot be expected to understand the science of pedagogy as teachers do, but should at least be able to judge of the physical condition, mental development, and moral growth of their individual children. They should be sympathetic and receptive in their attitude toward questions of education, should encourage experiments and welcome improvements, and should unswervingly hold school authorities and teachers to the obligation of making constant progress. While taking advantage of every educational opportunity for their children, it must be always with the understanding that health is not to be risked for education. Whatever the child may learn without injury to his health, without disturbing the balance of the nervous system, without weakening the mental faculties is education; whatever must be paid for in diminished power is worthless. It is easy to see that the knowledge of the actual physical condition, and of the nervous system, must be of the first importance to those who select the studies of a child and fix the time that he should give to mental effort.

In many cities practical tests of the variations of mental power in individual children, and their connection with the physical condition have been conducted.

Many children are found, upon examination, to have defects of sight or hearing not previously suspected by parent or teacher. They may be slight, and yet may make the school work vastly more difficult for the victim. A child who is near-sighted or has an astigmatism, may be himself utterly unconscious of any defect. Perhaps he has never been able to see as distinctly as other children, or perhaps a defect has grown so

gradually that he has not felt it. As a consequence he may see what the teacher writes upon the blackboard, or shows upon charts, or in object lessons, so indistinctly that he appears to be stupid or indifferent without being so.

These experiments disclosed many cases where defective eyesight could be traced directly to lack of nourishment and proper sleep. But while imperfect sleep, bad food, or poorly-printed text-books, and improper habits of holding books might unite to increase the trouble, the effort of the dull child to do the same kind and amount of work that is done by pupils of normal powers would of itself cause the most serious injury.

It must be remembered that no single organ of the body can fall from the standard of perfect health without affecting the balance of the nervous system, consequently a very slight defect of vision, neglected, may increase nervousness, disturb the health, and impair the vigor of the mind.

These same effects also follow where a child suffers from some slight defect of hearing. An instance was cited where the child affected sat some distance from the teacher who was giving instructions to the class about the lesson; he at first earnestly tried to hear, but, as the effort of listening became tiresome, his attention waned, his gaze and thoughts wandered, and he lapsed into idleness and indifference. When the teacher ceased speaking he listlessly made a few nervous, disconnected efforts to focus his mind on the small portion of the lesson that he had — by straining every nerve — been able to glean. Seated nearer the teacher and the lesson again explained, the child was immediately interested, followed the explanation closely, and when it was finished set vigorously to work. The result was that the failing that had so materially interfered with his success in school, and which had been considered to be stupidity, was now rightly attributed to defective hearing.

Continuing the investigation of defects of vision and hearing, it was found that they were much less common in the youngest school children, and that they increased in frequency as the higher grades were reached, all of which goes to prove that school work may make such defects greater, generally because, their existence being unsuspected, the strain is allowed to continue to the increasing detriment of the pupil.

A theory long advocated by manual training teachers was demonstrated by these experiments to be a fact; namely, that the physical instruction which teaches order, rhythm, accuracy, and judgment, reacts upon the nervous system, the brain, and the character in the form of a symmetrical and rational development. Therefore, it should be regarded not merely as a practical expedient, but should be welcomed as a powerful educational force.

The benefit of these investigations on the part of progressive educators will not be confined to the schoolroom alone, but will do more than anything else to bring teachers and parents together in an understanding of the needs of the individual child; for the sympathy of parents will naturally be enlisted when they know that their child is being considered as an individual and not simply as a part of a grade.

In connection with this idea of individual training, one defect of our school system at present manifests itself plainly: that is the requirement that every child, no matter what his physical condition, shall do a certain amount of work in a term, or suffer for the failure. This amount seems to be the maximum which could be accomplished by the strongest pupils under the best conditions, and any illness, absence, or loss of power from other cause is met with the additional handicap of work to be made up. Of course, such a requirement acts practically as a tax upon holidays, and the pupils who are most in need of rest and recreation are the very ones deprived of it, and this in spite of the fact that many times a single holiday with freedom from lessons, nerve strain, and restraint, would save a threatened illness and subsequent weeks of absence.

Parents will hesitate to take a child away on a journey during the school session, though he may actually need the change of habits and scenes, and almost invariably gains more educationally from the new ideas that come to him than from the lessons missed. This is not a reflection upon the schools, but only an exhortation to every individual mother to study her child and his need. When the tension is not relieved and an illness results, the child is frequently hurried back to school before he has entirely recovered his normal health. This is a serious mistake, because Nature also insists, like a rigid school-teacher, upon making up lost time. The ravages of disease must be made up, the vitiated and weakened blood purified and enriched, the wasted tissues rebuilt, the muscles toned by exercise, the balance of the nervous system restored, the brain fed with good, nutritious blood until it is as strong as before; and if one must choose between learning Nature's lessons and those of the school, one would a thousand times better learn Nature's. She is at once wiser and more inexorable.

It sometimes happens that the mother, as well as the teacher, constitutes herself Nature's rival. To the unavoidable strain of the public schools are added music lessons, with hours of piano practice, or drawing lessons with their accompanying strain upon eye and nerves and brain. This course is pursued more especially with girls, and the world is full of feeble and nervous women who have had an exhaustive school course and long and expensive lessons in music, but who are neither cultivated women nor tolerable musicians. Yet these same women might, with proper development, have been well and happy, with lively faculties, cul-

ture, and an appreciation and enjoyment of music which would have added to their usefulness and pleasure, had not ambitious parents driven them from the school desk to the piano school, and consumed their young vitality in the pursuit of an education, which, after all, failed to educate.

For some reason few of us think at all of the fatigue which must overtake school children. One of the common causes of unbalanced nervous systems is schoolroom fatigue. The subjoined extract from Dr. Smith Baker's "Fatigue in School Children" will certainly convince all who read of the seriousness of this question: —

"Dangerous fatigue should be looked for when the angles of the mouth are found depressed (usually denoting bodily pain); when there are horizontal furrows across the forehead that are not due to transient impressions, probably denoting mental anxiety; or when the eyes wander, or are 'fixed' nowhere, the pupils are dilated, or when there is fullness or a blue coloration beneath the eyes; likewise, when there is seen a broad, white line encircling the mouth, or there are bright red 'blush spots' on the cheeks or neck; when the skin is 'muddy,' or hot, or dry, and the pulse is noted to be unusually slow or rapid.

"With such children all the bodily positions are apt to be awkward and 'lopping,' with the head bent forward, and the shoulders held at different heights; while the movements are very generally asymmetrical, forceless, and few in number, and are perhaps jerky, or fidgety, or irritable, from unnatural increases of reflex activity. Also the fingers are apt to twitch, the face to be stolid, the tongue to be waywardly nimble, or perhaps absolutely unresponsive and inactive, and the speech and voice noticeably altered in pitch and volume. The most alarming point is reached when such a child becomes anesthetic to his own fatigue, that is, he cannot feel his own exhaustion."

The dangers of and liability to schoolroom fatigue are much increased at the period of adolescence. At this time, Nature herself is making great demand upon the vital force for the development of special organs and functions, and is consuming such a dangerous amount of vitality that it is obvious that this should be, in other respects, a period of comparative rest. Our educational system, however, does not seem to have been based upon this principle. At this time of physical and natural stress, children at school are subjected to the most strenuous work. They are in the difficult eighth grade, or they are in the high school, or are just entering college. In addition to this, girls are studying music and accomplishment, and boys are gathering knowledge of business and practical life.

All this study of the child and agitation of educational questions will result, after a while, in a rational provision for this period. It is possible that teachers and parents may then conclude that it is better for

girls or boys to leave the public schools with the eighth grade and to spend these critical years quietly at home, ripening their minds upon good literature and practicalities, than to take the high school course at the risk of broken health, impaired nervous system, and probable mental loss. That is to say, the education to be got at home will be worth far more than that which the schools offer, if it must be paid for at that price. Where there is some chance of allowing the girl to complete the school course and to escape these evil results, much will depend upon the wisdom and management of the mother. She should, at least, insist upon confining school work to a limited number of hours.

To many girls the change to womanhood brings suffering and illness; in all cases it causes lassitude, nervousness, and loss of mental force. One would think that the pallor, the pain, the weariness of any girl compelled to drag herself up long flights of stairs and to go through the usual routine of difficult lessons, with her whole body in painful revolt, would appeal to mothers so strongly that nothing further would be needed to stir them to action. Add all the probable consequences of mistreatment at this period, and there is every incentive to immediate action of mothers in every community.

It seems that the idea of distinction, of school honors, and emulation, is so much a part of our school system that few people can conceive of an education without them. Yet many more children have lost health and have been handicapped for life in the pursuit of school honors than in education. In almost every case the parents are behind the children, urging, bribing, threatening, comparing them with rivals, driving them in many ways to sacrifice health (and future success, too often) for the sake of class honors.

It should be true that the conditions which are favorable to vigorous bodily growth are equally favorable to the production of strong mentality; but comments have been made for a great many years upon the fact that college valedictorians and prodigies of learning sink from public view when the college career is over, and upon the fact that there are numbers of great men in every generation whose school standing gave not the faintest prophecy of superior minds. While popular tradition points to big men as slow to grasp ideas and to respond to them, it also represents them as having the qualities of judgment, persistence, and concentration, which more than make up for the lack in responsiveness. When we consider how few men of the best physical type are restless, nervous, easily affected by other minds and quickly responsive to influences, we might conclude that the possession of these particular qualities of temperament are injurious to the physical nature.

With such a premise, we should care less for quickness and brightness of mind, and make greater efforts for strength and persistence. This

would result in a complete revolution in our educational ideals, we should not care so much for general versatility, and should therefore limit the curriculum somewhat; we should eliminate very rapidly all the artificial stimulants of grades, honors, etc., because we should not feel compelled to hasten the children as we now do, but should give more time for a natural development.

Our present school course and methods seem to have been chosen for the "motor" child,—the child with the quick, active, versatile mind,—and sympathetic hearts must ache a little for the "backward" child. His temperament, his body, even, cry out for time and patient treatment, but where is he to get it? Not at school, where the pace is set to the brightest minds; not at home, where his slowness, his placidity, his very patience are a constant reproach, because they seem to keep him behind other people's children in school work, and general "showiness." Nobody can stop to study such a child, and when in after years he proves that he had mental power of a superior kind, everybody is surprised. And they should be, that any individual of this particular temperament should have been able to retain any degree of intellectual vigor amid such unfavorable circumstances of worry, hurry, and misconception.

This is another of the questions which parents must discuss with school authorities. They may well urge that "backward," slowly developing, and inconspicuous-minded [to coin a phrase] children shall have an equal chance with the others. Let them tenaciously refuse to have the latter settled by arbitrary rules, such as classing them as "dull," and putting them into classes made up of children of similar temperaments and branding all as incompetents. One would judge from the way in which most educators discuss the problem of the "dull" pupil, that he has only a very small claim upon school life; that he should be isolated, as if dullness were catching; and that neither he nor his parents could have the least sensitiveness at having him treated as a handicap upon the general progress.

Yet very often this reprehensible "dullness" is but a phase of growth, and many a child, who has been rated as incompetent by teacher and parents, has triumphantly proved that his mental powers were even better than the average. He merely needed time to develop them, and there were certain laws of this development which did not permit him to make an open display of his progress at every stage. Were this not true, were every "dull" child to remain so till the end of the chapter, would it not be a more pressing duty of the schools to fit their methods to him, bringing every faculty to its highest possible development, than to choose them for the quicker mind which is vastly more able to educate itself? Surely it is time that the dull child should have its share of the feast and no longer be left to pick up the crumbs.

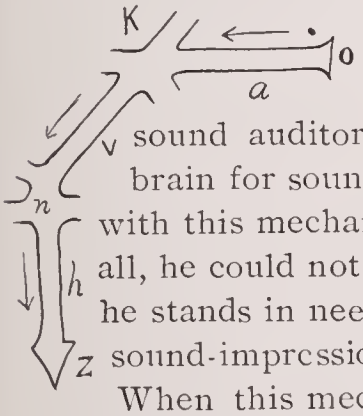
It should also be remembered that the very methods which advance the "bright" child are always in danger of disturbing the balance of his nervous system and interfering with his physical growth. The final result of this must be impairment even of that mental power for which everything else has been sacrificed. Everything in his training —the urging of teachers, the pride of parents, the emulation, the necessity for mental effort under any circumstance, the cultivation of responsiveness, the ceaseless brain activity and nerve tension — unites to destroy his physical vigor, and there must come a time when the brain will have to pay its share of the penalty of diminished vitality.

KATE E. BLAKE.

LEARNING TO SPEAK

TO THE unenlightened bachelor only, does the fact that the baby is learning to speak seem less than miraculous. The mother, who first hears the little incoherent babblings of her baby slowly cohering into words, is lost in wonder and admiration. The fact that all other little human animals manage to acquire this marvelous art, does not in the least prevent her from finding it most marvelous in her own baby.

In this she is seconded by the scientists. The process by which speech is understood, imitated, and replied to, is one of which the great subtlety and complexity reveals itself only to the most careful search. Indeed, so involved is the process that, at first sight, it seems almost impossible to explain it clearly enough to be comprehensible to the unscientific reader. In this attempt, however, as in many others, I am indebted to Professor Preyer for the accompanying diagram which explains and simplifies the whole process.



The process is naturally divided into three parts. For the first, a perfect ear and a sound auditory nerve, together with a storehouse within the brain for sound-impressions, is necessary. If anything interferes with this mechanism the child cannot hear speech, but if this were all, he could not understand it. For understanding what he hears, he stands in need of the nerves which pass from the storehouse of sound-impressions (see diagram) to the speech center of the brain. When this mechanism is complete, he is able to hear words and to understand their meaning, but not yet to speak them. In order to be able to hear, to understand, and to reply, the entire mechanism must be in perfect working order.

There are a number of diseased conditions in adults which show the difficulties or defects of speech which must result from the inhibitions of any part of this nerve tract. Such defects are exactly parallel to the imperfections of the speech of children just learning to talk. Professor Preyer has made the most exhaustive analysis of all such speech defects, an analysis which shows conclusively that the lack of brain and nerve development in the child is responsible not only for the defects of speech, but also for the way in which he learns to speak.

To be able to repeat a word intelligently, means that the speech mechanism, that is to say, the passage from the ear to the storehouse of sound-impressions, and from that to the motor speech centers, and from that to the motor nerves of speech terminating in the organs of speech, is complete.

The first part of this process is called the impressive process, in which the nerves, extending from the ear to the storehouse of sound-impressions, are alone concerned. This portion of the speech mechanism is the earliest to develop, and the proof that it is complete is shown by the looks and gestures of the yet speechless child. These looks and gestures may consist in such small things as starting at a loud noise, or showing pleasure when music is heard, or in recognizing the sound of the mother's voice.

As soon as any words are recognized, there is evidence that the second nerve tract — that concerning the understanding of words — is beginning to develop. This is, of course, the highest activity, and the one most worthy of education. The fact that it is ready for action is betrayed by the child's attentive listening, as, when he catches the sound of his mother's voice in the next room, he waits to hear it repeated; and by the association of certain movements with sounds; as, for example, when he begins to play, "Patty-cake, patty-cake" on demand, without first being shown by gestures. Or, when he plays "Peek-a-boo" in the same fashion, or springs with joy when he is asked if he would like to go "By-by."

Perhaps the easiest way to understand this process is by comparing it, as Professor Preyer does, with the manner in which the child learns to write. In general, the process seems to be — as Professor Preyer proves at considerable length, and as Dr. Harris, a philosopher cycles distant from him in methods, agrees — that the child first has ideas. He does not babble until he babbles into speech accidentally, and then finds equally accidentally that his speech fits into a place in his small world; but he speaks under the pressure of a strong desire to give expression to an idea. The idea may simply be that of food, but he manages in some way to express the fact that he desires food, even before he has words to convey it. This does not refer, of course, to the purely

organic crying of a child who is uncomfortable from hunger. It means the little murmured syllable, "Na, na, na," and the like, which children, not yet able to speak, fashion for themselves to express the idea of hunger. This is, in its way, a genuine human speech; not like the whine of a dog, or the mew of a kitten. It is entirely different, being the intelligent and volitional use of certain sounds to convey certain impressions.

Secondly, he imitates syllables, and finally words. The fact that he can do this, as we have said, shows that the speech mechanism is in perfect working order; and that from now on he is a creature capable of ever higher education in the use of language.

Thirdly, he associates ideas, not only with the sounds which he makes himself, but with those that he hears, and also with those that he imitates. As soon as he has once taken this step, he will himself unceasingly struggle to get control of an ever-larger vocabulary.

Moreover, he proves his place in creation by the fact that no sooner has he learned to use only a very few words than he begins to make independent, though always logical, changes of formation. This stage of development, which corresponds in the child with the language-making stage in the history of any nation, is the evidence of the presence in him of a genuine creative activity. To be sure the things which he says at this time are, to us who look on, content in the possession of a perfected and varied language, amusing rather than an evidence of high intellectual development. Nevertheless, when a little boy calls the roof of his mouth his "teeth roof," he has already shown himself capable of putting together two dissimilar ideas to make a third. That is to say, he has been able to think of the roof of his mouth and see at once its likeness to the roof of a house, and its unlikeness, and to so name it as to express clearly both qualities. The same thing is true of the little fellow who, on a very hot day in early summer, noticing his perspiration for the first time, ran into the house calling to his mother in great alarm: "O, mamma, mamma, come quick and fix me! I am leaking all over!" A little deaf girl, who, though ten years old, was just learning to speak, and therefore, as to these faculties, was in the same stage of development, called a glass of Apollinaris a glass of "prickle water."

In order to appreciate more clearly the manner in which the normal child gets the control of these functions, let us take up the record of Professor Preyer's little boy, and see what he did, from the time of his birth until he was two and a half years old. In his book on "The Intellect and the Will," Professor Preyer gives the most exhaustive information regarding his child's development in this respect, but we shall have space here for only a brief *résumé*.

During the first six months his child heard and uttered mostly vowel sounds. It is interesting to note in this connection that Swedenborg,

speaking from an entirely different point of view, two hundred years before Preyer, said that infants heard and understood vowel sounds before consonants. He explained this according to his theory of correspondences by saying that the vowel sounds corresponded with the emotions and the consonants to the thoughts; that as the infant felt before he thought he naturally expressed his feelings first. Certainly, no one who has seen a little baby, fed, warm, and comfortable, lying upon its back, and "cooing" into its mother's face, can deny, if he has a soul open to such perceptions, that these celestial sounds were the utterances of pure love.

However, even before the seventh month the child is able to respond to others with inarticulate sounds, vowels mostly, but toward the seventh month also in simple syllables. As such responses are almost entirely lacking in microcephalic and deaf children, they must be held as evidence that there is now present an intellectual cerebral operation.

In the constant babblings and gurglings of children not yet eight months old are found almost all the elementary sounds needed for later speaking. These endless monologues, undertaken and continued with much seriousness, are indeed the gymnastics of the organs concerned in speech. The child must practice long and faithfully before he can gain such control of the delicate mechanism as to be able to fashion even the simplest words that he wants to speak. The five-finger exercises which the young pianist must laboriously practice for hours and days are not nearly so necessary to his ability as a musician, as are, to the normal human child, these apparently inconsequential sounds to the later power of speech.

At the end of the seventh month, Preyer's boy responded to the ordinary childish questions, "Where is the baby's eye?" "Where is his nose?" "Where is his ear?" and the like — not, indeed, in words, but by pointing to the features named. He did not succeed in always doing this without mistakes, but he usually did, and showed, moreover, the common childish pleasure in the exercise of a budding faculty. Although speechless, he could nevertheless show what the dog said, and the cow. He did not succeed in accurately repeating syllables until the eleventh month. In that month also the child first began to whisper.

At one year old the child showed his greatest advancement by clearly discriminating between sounds. He showed this when his name was called, and also by expressing a new sound. He obeyed the command, "Give the hand," which Preyer thinks was a sure proof that he understood the words he heard. He reports that another child did the same thing in the seventh month. "In this," he says, "we cannot fail to see the beginning of communication by means of ordinary language. But this has remained a one-sided affair until past the third half-year, the child being simply responsive.

In his fourteenth month the child still repeated by imitation, very uncertainly, but there was marked development in the power of associating sounds and ideas. This was shown in the following instance: The child was asked, "Where is your clothes-press?" At the words the child turned his head, and looked earnestly at that article of furniture. He was standing at the time, holding on to his father's hand, and although he was not able to walk a step alone, he drew his father through the room up to the clothes-press, which he opened without assistance. Here was an idea of a definite stationary object, associated with a sound heard, and so strongly that it was able to produce an independent act of locomotion — the first one.

In the eighteenth month it was evident that the growth had all been in the direction of an increased ability to discriminate, and a better understanding of all spoken words. He pointed out a wide range of objects when he was asked to, and obeyed spoken commands. The voice, also, had gained a greater flexibility and expressed the varying moods of the child with greater precision.

The same was true of the nineteenth month; and in this month we have the first record of his spreading a newspaper on the floor, laying himself flat upon it, with his face close to the print and reading aloud — that is, repeating for a long time in a monotonous voice the little syllables he knew.

In the twentieth month, suddenly he was capable of repeating words of two syllables — that is, words of like syllables, such as "mama," and "baby"; and also words the second syllable of which was the reverse of the first, such as "Otto," and "Anna." He imitated more surely than before, sometimes, apparently, involuntarily.

In the twenty-first month he imitated better, and pronounced more consonants. Wilfulness now appeared for the first time, and made it difficult to say whether the child *would not* or *could not* repeat the words that were spoken to him. (This was the first evidence of any admixture of what are called the moral motives with the process of learning to speak.)

In the twenty-second month his understanding of spoken words increased until it reached the point of comprehending complex commands, like: "Go, take the hat and lay it on the chair." But his repetition of words was still rudimental. In this month also he first began to sing.

In the twenty-third month is recorded his "first spoken judgment." The child was drinking milk, carrying the cup to his mouth with both his hands. The milk was too warm for him, and he set the cup down quickly, and said loudly and decidedly, looking at me with eyes wide open, and with great earnestness, '*Heiss!*' (hot). This single word was to signify, 'The drink is too hot.'"

In the twenty-seventh month the increasing number of ideas testifies to a rapidly developing intellect. This was shown, for instance, when the child saw a tall tree felled, and called out, "Pick up." Seeing a hole in the dressing gown, he said, "Sew"; while in his play he sometimes warned himself, "Take care." To the question, "Did it taste good?" the child answered, while still eating, "It does taste good," thus distinguishing the past tense in the question as it was asked from the present tense which he used in his answer. "On the other hand," says Preyer, "the feeling of gratitude is as yet quite undeveloped." The child, as on the previous month, says "*Danke*" (thanks), when, for instance, he is opening his wardrobe door alone. The word is thus, as yet, unintelligible to him, or is used in the sense of "*So*," or "Succeeded." His frequent expressions of pity are striking. When dolls are cut out of paper the child weeps violently, in his most pitiful manner, for fear that in the cutting the head may be taken off, yet nobody has taught the child anything of that sort.

In the twenty-eighth month the child first begins to use the single prepositions. There is also a steady increase in the number of words that are correctly pronounced and used. Also, during this month, he first uses the article, his preference being given to the definite article. Now he begins for the first time to ask questions. Heretofore he has often answered them, but has never asked them.

It is not until he is two years old that he manages to make simple sentences of two words; and he shows no sense of number until he is two years and five months old. Previous to this, numerous attempts have been made to teach the numerals, but he has invariably confounded them. Yet, although this is true, counting is already taking place, though not at all in the fashion which might be expected. The child, suddenly, of his own accord entirely, begins to count with his ninepins, putting them in a row, saying with each one, "*Eins* (one)," "*Eins, eins, eins*"; afterward saying, "*Eins, noch eins*, (one more) *Noch eins, noch eins.*" The processes of adding are thus performed without the naming of sums.

The study of this record, so carefully kept, but here so slightly reproduced, will show that the notion that the child's speech always begins with nouns and is followed by verbs is not founded upon fact. As one might suspect from the complexity of the young creature developing into full human likeness, no such simple, hard-and-fast rule could, in the nature of things, be true.

The order of development is a much subtler thing, involving, as it does, the complicated mechanism of nerves, brain centers, and delicate organs, and dependent as it is upon all sorts of physical conditions, and inherited aptitudes. The processes of speech must vary with different children and different conditions. But beneath this variation may be

detected here, as always, the presence of an unvarying law. Three things must be present with every child who learns to speak: sound speech organs, sound ears, and a sound understanding. These three things do not develop simultaneously, for the speech organs are all present at birth; the hearing mechanism continues its development after birth,—at birth it is in so incomplete a condition that the child is practically deaf,— while the understanding is the latest of all to develop. At birth it is in the most rudimentary state, and its development comes later than that of hearing. Yet this last faculty is the one best worthy of cultivating, the one to which education must espeeially address itself. As we shall see later, every urging of the child to speak retards the development of this faculty by concentrating the ehild's force upon the mere effort to hear or to imitate.

PECULIARITIES AND PERVERSIONS

There are many peculiarities of the speech of little children, many of them amusing, all of them endearing; some of them springing simply from undevelopment, and others from arrested development. This latter, of course, shows a really pathological condition, and must be met with appropriate remedial procedures. Others have no sueh significance, and it is in order to assist parents in making this distinction that the following deseriptions of the various modifications of the speech of young children are given.

It may be premised that peeuliarities of speech are not inherited; so that the mother who lisps or the father who stammers need not fear that the children will inherit the same disorder. The voice, only, is inherited, and this is because the organic structure of the vocal apparatus is inherited.

One peculiarity is noticeable in the speech of every healthy ehild: It is onomatopoetie; that is to say, his speech is largely a speech of imitation. His first idea, like the first idea of primitive savage peoples, is to convey a picture in sound. Therefore, if he speaks of a cow, he calls it, if he is a German, "*Mu, Mu*"; but if he is English, "Moo, Moo." He calls the cock, "*Kickiri Ki*," if he is a German; "Er-er-er-errr" if he is English. In both eases, however, the effort is the same, and the variation of form is evidently due to the assistance which he receives from nurse or mother. Preyer's boy said, "*Picp, picp*," for the chicken; while the English child using the same word would compel his father to spell it, "Peep, peep!" Preyer's child said, "*Ling-c-ling!*" when the bells rang; but our children say, "Ting-a-ling!" It is evident, however, that the American and the German baby at this stage of their speech development could understand each other perfectly, and could doubtless

make themselves intelligible also to a Russian, or a North-American Indian baby.

Another normal peculiarity is what Preyer rather offensively calls logorrhea; by which he means simply loquaciousness — that is, all young children hold long monologues for mere pleasure in the sound. Although insane persons sometimes reach this condition as a result of brain disease, yet if the baby did not reach it, there would be reason to suspect brain disease. For, in the one case disease has so affected the adult's brain that it has deteriorated to the point where it takes delight in this same repetition, and in the other the brain has just developed to this point.

It occasionally happens that the opposite condition exists: that is, the child who has already learned to speak a little becomes suddenly dumb and will say almost no words, and those few words of negation. In many cases this seems to be merely the effect of a wilful obstinacy; but the child's will is so far from being developed to a point where it could successfully maintain itself for a long period against the will of others, that in this condition some organic lesion or an obstacle in the motor speech center must be suspected.

Stuttering, although a fault most easily acquired by imitation, cannot be regarded as a physiological condition. Stutterers sometimes have stuttering children, but this is not because the children have inherited the defect, but because they imitate the speech of their parents. Moreover, children who are teased by their friends, or commanded to repeat certain words, may fall into the habit of stuttering. It is of great importance with these children, and of some importance with all children, that they never should be ordered to speak. Neither should too great stress be laid upon the correct articulation of words. The whole process of learning to speak should be as unconscious as possible, and the child's attention should be centered rather upon the idea which he is striving to express than upon the mechanism which he is using.

In the case, however, of confirmed stutterers, a certain amount of conscious attention to the speech may be necessary. I have heard of one case in which a little boy stuttering badly was imitated by his younger sister until they both stuttered. They were cured by being compelled to talk with their teeth shut, and to stop and think before speaking. But they did not succeed in overcoming the difficulty until the boy was about fourteen years old, and the little girl at least twelve years old. The family were very careful neither to scold them for their speech, nor to find fault with or tease them; for they noticed that when other children teased them, the stuttering became much worse.

Stammering and lisping both come from a lack of development of certain nerve tracts. Preyer thinks that the central motor mechanism [see diagram] is in these cases not yet complete. Therefore it is evident

that no direct attention is to be paid to this fault, but that an effort must be made to increase the general health, giving every facility to the normal development of the brain and the nervous system.

Some children find certain consonant sounds more difficult to pronounce than others. "L" is beyond the powers of most young children; so is "r" and "g." These little peculiarities, which of course disappear sooner or later in any event, are perhaps most easily broken by the association of children with each other. I remember two little girls, Alsie and Ethel. Ethel spoke very clearly except that she used to say "y" for "r." Her father, amused at this little trick, which was rather a winning one, used to make her say, in order to exhibit it, "A yough yat yan ayound the yoom." Her playmate, Alsie could speak "r" perfectly, but not "g." She used to say, "I am doing to be a dood dirl to-day." Alsie laughed at Ethel for the "yough yat," and Ethel made any amount of fun of Alsie's "dood dirl." In a month they were speaking as clearly as grown people.

Perhaps the most practically valuable conclusion from all these observations is that those who imitate earliest do not exercise the highest powers of understanding. The cerebrum may indeed grow more rapidly with them than with slower children, but also it soonest ceases to grow. Precocity in speech, like other forms of precocity, is delightful at first but destructive at last.

One cannot doubt that if it were clearly understood that urging the baby to speak prematurely, has the most dangerous and injurious effect of teaching him not to think thoroughly, the natural inclination to put the winsome little fellow through his tricks would be more steadfastly resisted. It is exactly with the hope of bringing home the importance of patient self-restraint on the part of the mother, that this description of the process of learning to speak has been entered into. If it means anything at all, it means that the centro-motor mechanism, the latest to develop, is also the most important and the most capable of education; that it must therefore neither be forced nor deprived of any opportunity for orderly growth. Practically, this means that the mother while talking plentifully to her child, letting herself quite freely follow her instinctive desire to talk things over with the little staring creature upon her knee, must demand from him no other response than that look of almost superhuman sympathy which sometimes thrills and rewards her.

To urge him to repeat what she says to him or to insist upon his looking at objects while she names them to him after he has passed the point of obvious fatigue, is to strain his attention past the safety point and to run the risk of forcing this premature development of the higher speech centers. Moreover, the expression of some such strong wish or command on the mother's part serves to embarrass the motor course, the

child's activities, which should pursue their way unconsciously, being interfered with by the consciousness of an alien desire. As we have seen, stammering and lisping as well as the imperfect formation of words, may be brought about by this consciousness.

In order to prevent such imperfect speech, it is also well to avoid that lovable but objectionable form of communication known as baby talk. It is natural enough for the mother to endeavor in this fashion to make her voice express to some extent the sympathy and tenderness of her feeling, and to lend to the commonplace words of daily life a tenderer pronunciation. While there is no limit to the amount of tenderness which she is justified in thus putting into her tones, representing as they do the emotional side of her nature, she must not let her feelings get the better of her thinking and interfere with its clearness and precision. As consonants represent thoughts, it follows then (if Swedenborg's theory be true) that her pronunciation must be as clear and perfect as her intonation is tender. Hearing her speak thus, as it were with love and wisdom combined, the imitative child will form even his first words as perfectly as the state of his speech organs will permit. His ear, opened eagerly to drink in her loving tones, will become more and more accustomed to fine discrimination and will eventually pass judgment upon his own speech, improving and correcting it.

We have reached another conclusion also, with Professor Preyer: that questions when they appear signify that a very high order of intellectual development has already taken place, and that if this faculty is not met in its early stages with prompt response, the highest faculties of the mind may be crippled. Professor Preyer's conclusions are so sound that they are worth quoting in full: —

"The child's questioning as a means of his culture is almost universally underrated. The interest in causality that unfolds itself more and more vigorously with the learning of speech, the asking why, which is often almost unendurable to parents and educators, is fully justified, and ought not, as unfortunately is too often the case, to be unheeded, purposely left unanswered, purposely answered falsely. I have from the beginning given to my boy, to the best of my knowledge invariably, an answer to his questions intelligible to him and not contrary to truth, and have noticed that in consequence at a later period, in the fifth and sixth and especially in the seventh year, the questions prove to be more and more intelligent, because the previous answers are retained. If, on the contrary, we do not answer at all, or if we answer with jest and false tales, it is not to be wondered at that a child even of superior endowments puts foolish and absurd questions and thinks illogically — a thing that rarely occurs where questions are rightly answered and fitting instruction is given, to say nothing of rearing the child to superstition."

However, it soon becomes difficult for a mother to answer all of a child's questions, especially if there be several children in the family, with their "understanding of causality" very fully developed. In such cases, one wearicdly wonders whether one should give all one's life to the business of answering questions, allowing all other affairs whatsoever go unheeded, or to run the risk of crippling the child's mental activity.

There is, of course, a way out of such a dilemma; if there are many children, they may with advantage answer each other's questions, or be sent upon a tour of investigation which will result in the answer. Each child may also be required to answer his own questions as far as practicable. For it often happens that a child, eager to acquire knowledge, thinks it much easier to ask of a wise and willing mother than to use his own faculties; while it is a thousand times better for him to use his own wits and power of observation. Moreover, children sometimes question idly for the mere pleasure of tossing a thought from mind to mind, enjoying a sort of mental game of ball. To answer such idle questions seriously would not only be a loss of time, but might, perhaps, confuse the child so that an idle interest would seem to him as worthy of attention as a serious one. In such cases, the simple reply, "Well, what do you think about it yourself?" may transform his passing impulse into a genuine thought.

Nor is thinking at all beyond the power of a child whose vocabulary is as yet very small. As Professor Preyer contends with great earnestness, ideas are independent of words and precede them. In fact, "the formation of ideas is not bound up with the learning of words, but it is a necessary prerequisite for the understanding of the words to be learned, and therefore for learning to speak." But Dr. Harris makes a distinction between the activity which Professor Preyer calls ideas and genuine human thinking. He says, "It should be carefully noticed that this activity of generalization which produces language, and distinguishes the human from the brute, is not the generalization of the activity of thought, properly so called. It is the preparation for thought. These general types of things are the things with which thought deals. Thought does not deal with mere immediate objects which are indicated by words — *i. e.*, general objects. Some writers would have us suppose that we do not arrive at general notions except by the process of classification and abstraction, in the mechanical manner that they lay down for this purpose. The fact is that the mind has arrived at these general ideas in the process of learning language. In infancy, most children have learned such words as, is, existence, being, nothing, motion, cause, change, I, you, he, etc. They do not contain all the experience that they will contain later in life, but they are already used as general terms."

However this may be, the child very early begins to play with his speech; he seems to recognize it as an instrument put into his hands rather than, as it seems to be in adult life, a very part of himself. In this early stage of his being it is more sharply differentiated from the ego which employs it than it is later when the very thought of the man takes the form of words, and therefore his habitual language comes to mean his habitual consciousness. In school training, words have, to a large extent, been thus confused with thought; but the young child, thinking before he speaks, in the full light of innocence, perceives the distinction and plays with it. As an instance, I remember that I was once carrying my first little boy, eighteen months old, about the room on my arm, while I named to him, in response to his eagerly pointing little finger, the various objects on the walls. We at last came to the thermometer. That was a long word for so young a boy and I said it very slowly and carefully: "Ther-mommy-ter." He repeated it equally slowly after me several times, and then suddenly laughed out, "Ho! ho! Ther-poppy-ter!" This was a genuine pun made by a child who had not yet six words at his command, but among these six, of course, were the words mamma and papa, with which he played.

Three or four years later, this same little boy was sitting on the floor lacing up his shoes — very slowly — and philosophizing meanwhile as was his wont, "Shoe — shoe— why did they call it shoe? Why didn't they call it cat or pudding?" he murmured to himself. He was in the process of discovering that the names of things were purely arbitrary and he was puzzled by the fact.

It is because of this love of playing with words that rhymes and jingles are hailed with such delight; and no better relief to the strain of mastering at once a complicated mechanism and a foreign language — the difficult task set before a young child — can be devised than the amusing rhythm and alliteration which make up the body of the literature known as "Mother Goose." Exactly what the effect of a rhythmic repetition of sounds may be upon the nervous system of the child is not yet known, but it is probable that it has something of the soothing effect of repeated contacts. For it is well known that a nerve pressed again and again in the same way will, by and by, fail to respond with the original keenness, and that meanwhile some actual change of structure has very possibly taken place. May it not be, then, that the repetition of sounds that forms the basis of juvenile jingles, may at once lessen the nervous strain by lessening the keenness of attention and increase the familiarity with the words by the actual organic changes thus produced?

So great is the fascination of the rhythmical method of speech that children very soon begin to make all manner of rhymes for themselves and also to speak in blank verse. A little boy, aged six, one morning

while he was dressing, instead of paying the slightest attention to the business in hand, got off this little poem upon gravitation — a topic which he had discussed with his older brother until long after he ought to have been asleep the night before: —

"Gravitation is everywhere.
In the birds and flowers,
In the skies and oceans,
In the mighty walls of air."

This little poem betrays, of course, the fact that the child had heard some good poetry — noticeably Robert Louis Stevenson's "Child's Garden of Verse," and Frank Dempster Sherman's "Little Folk Lyrics." But he had made the swing and phraseology of these poems his own, and was capable of using them to express an idea which was altogether foreign to any of them.

The memory that thus recalls by the aid of universal ideas and conventional sound-symbols makes for itself, as Dr. Harris says, "Pigeonholes, as it were, in the mind, whereby the soul conquers the endless multiplicity of ideas in the world," — that is to say, each word stands to the child for a vast number of ideas and relates them to each other. As Preyer shows, in the earlier stages of learning language each word stands for very many more ideas than it does in later life; but even in later life, each word by itself and in relation to other words stands for a great number of associated ideas. By the use of them then, as by the use of pigeonholes or filing cases, ideas are classified, arranged, and held ready for reference.

Speech, therefore, means a recognition of the general in the particular, and hence true personality. It is by no accident that the speech of feeble-minded children, or of persons whose brains are diseased, is imperfect; the personality of these persons is, as it were, imperfect also. For if personal consciousness consists in the dual recognition of the relation of oneself to all of the world about one, and of one's unlikeness to all of the world, then, to an impaired brain, this consciousness cannot be fully present, and to the undeveloped brain it is not yet present, — that is, true personal consciousness is not present. The first proof of its presence is speech, for each word shows the recognition of a general truth in some particular object. For example, when Preyer's little boy said "*Heiss*" when he found his milk to be hot, and later applied the same syllable to other objects, he recognized a common quality as present in a wide variety of dissimilar objects.

Hence, as Dr. Harris convincingly shows, though with a condensed logic very difficult to follow, language is evidence of immortal individuality, because when a being uses arbitrary signs in order to communicate

with another being, we perceive him set free from the immediate control of a sense environment and finding sufficient reason for continued existence in his own inner activity, and in the joy of communication. Speech, then, implies the existence of a true self, conscious, active, and capable of immortality.

THE EDUCATIONAL VALUE OF PLAY

Activity is the condition of the child's being; in the first days of life, senses, nerves, and muscles are busily widening and clearing the avenues which connect them with the brain, and even while the senses are, for the most part, very dull, the brain is gathering force and constantly testing and developing the responsive powers of the rest of the organism.

Very early these activities take the form which adults have named "play." It is the serious business of life for little children, requiring as constant and complicated exercise of the powers as the arduous work of men and women, and directed to even greater ends, for it makes muscle, brain, and character. The difference is, perhaps, that the child yields himself gladly to the law of his being, and finds happiness in consequence; while grown people, having the old idea that "labor is the curse of Adam," put forth their activities grudgingly and think the fatigue which follows, and which little children accept without complaint, a hardship unjustly laid upon them.

Philosophers and teachers had long been considering the value of an education founded upon the child's own nature, when Friedrich Froebel first put this principle into a logical and practical system. Though he died in obscurity, and, probably, in the belief that his life and work were failures, he has revolutionized the world for the children; and if those who have taken up his ideas, and are applying them everywhere, work faithfully and wisely, he and they will have immeasurably advanced the race.

In his eyes, play "is the highest phase of child-development — of human development at this period; for it is self-active representation of the inner — representation of the inner, from inner necessity and impulse." That is to say, the child, who has, through his sense-development, been growing steadily in self-consciousness, now finds it necessary to express himself by means of the outer world. He has found himself, by means of this outer world, and now he must announce the fact. Heretofore, also, his relation to Nature has been that of a passive recipient: he has lain upon her broad bosom, as upon the bosom of his mother, drinking in the nourishment she afforded him. Through her he has gained life; he

must now express it and use it. Play is man's first conscious response to nature, the beginning of a joyous reciprocity, between himself — "the inner," as Froebel calls it — and that which is not himself but which loves him and serves him, and which he in turn loves and serves.

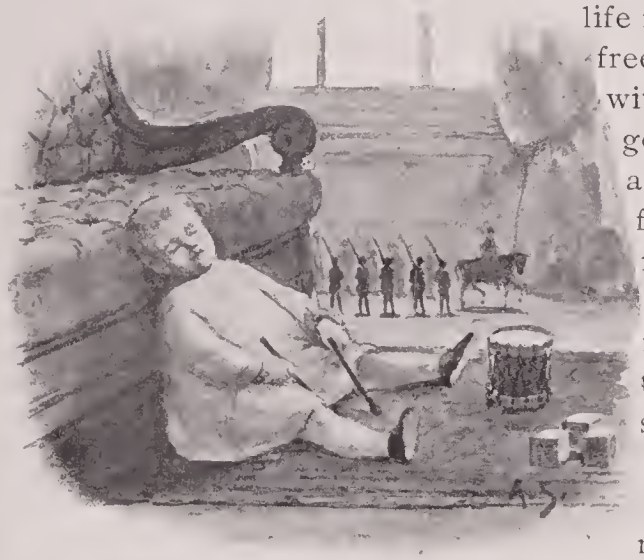
The play-impulse also marks the dawn of the religious feelings and thoughts. The child does not see Nature as the scientist sees her, but in a broader, a less-specialized way — perhaps a truer way. Specializations are likely to express incompletely at best the relations which the subject under consideration bears to the total scheme of things. The child, unable to see so minutely, aware of only a few great truths, applies these truths unhesitatingly to everything he sees or knows, and thus finds truth in everything. For example, he knows life, and to him everything is alive — a truth which the scientist arrives at only after long experimentation, a truth which he finds hidden in the innermost composition of things and which he calls conservation of energy, physical and chemical laws, and other hard names, all of which, summed up, mean simply that he finds the whole physical world in a state of perpetual change, continually adapting means to ends. The child has already found the same truth by a shorter process and accepts it so unreservedly that he is surprised at no change, and miracles are to him as entirely credible as a sunrise.

Therefore is it that races, in their childhood, worship at once nature and nature's God, nor make distinction between them. So the child. He personalizes everything, and his early exercise of reason shows the dawn of the insight that everything that is is human, either potentially or actually. He sees the whole world in the form of a man, and endows with his own thoughts and feelings every object about him. Nor should he be checked. This is one aspect of a great truth, and if we would have him arrive at the other and complementary aspect, we must let him thoroughly examine this one. More; we must enter into the examination with him. Very likely, in so doing, we shall recover something of the insight of our own childhood — an insight only too likely to be dimmed in later life.

Moreover, it is only by entering into the life of nature, completely and spontaneously, that the basis of experience for the later discrimination between nature and spirit can be found; we discriminate justly only between those things that we know thoroughly. In play, the child is laying the foundation for this discrimination, so important to all his thinking. The process seems to be something like this: At first he is one with nature, so much so as scarcely to have any individual consciousness; little by little, through the operation of natural laws regulating the acts of his sense-organs and the effect of sensations upon his brain, he perceives himself as something apart from and distinct from

nature; thirdly, by a series of infinitely varied experiments he discovers his true relationship with nature — a relation at once of son, friend, and master. This experimentation we call play. It is necessary to develop any true power of work; for the good worker is a man who has been well nourished by Nature, and has from her received a vigorous frame and wholesome energies — that is, who is her son — and has learned to use her forces and subject them to his will — that is, who is her master — and who knows and obeys her laws, following them easily and without friction, recognizing their beneficence — that is, who is her friend. As Froebel says: —

"Play is the purest, most spiritual activity of man at this stage, and, at the same time, typical of human life as a whole — of the hidden, inner, natural life in man and in all things. It gives, therefore, joy, freedom, contentment, inner and outer rest, peace with the world. It holds the sources of all that is good. A child that plays thoroughly, with self-active determination, perseveringly, until physical fatigue forbids, will surely be a thorough, determined man, capable of self-sacrifice for the promotion of the welfare of himself and others. Is not the most beautiful expression of child-life at this time a playing child? — a child wholly absorbed in his play? — a child that has fallen asleep while so absorbed?



"As already indicated, play at this time is not trivial, it is highly serious and of deep significance. Cultivate and foster it, O mother; protect and guard it, O father! To the calm, keen vision of one who truly knows human nature, the spontaneous play of the child discloses the future inner life of the man."

Nor is Froebel alone in the importance which he assigns to play. All the late psychologists, led by Professor Preyer, have recognized the importance of this spontaneous activity. The ancient philosophers, including Plato and Aristotle, approved it, and found it well to urge it upon the attention of the thoughtful men of their times. Luther condemned those who "despise the plays of childhood" and Rabelais, Fénelon, and Locke, together with Comenius and Pestalozzi, saw in play a wise outlet for the gathering energies of the child. Swedenborg said that the children in heaven were taught "by delights" and were shown the laws of the universe by means of representations in play. To Froebel, however, as Hailmann, the translator of "The Education of Man," justly remarks, "belongs the credit of having found the true nature and function of play, and of regulating it in such a way as to lead it gradually and naturally into work, securing for it the same spontaneity and joy, the

same freedom and serenity, that characterize the plays of childhood. In his gifts and occupations he found, for the two contrasts of play and work, the living connection, making them both utterances of the same *one* creative activity. In play, it is the exercise of this activity that forms the purpose of the exertion and rewards it with joy; in work, the external product, the outcome of the activity, becomes the purpose and additional reward of the exertion. Froebel has shown how both may be combined, how the human being — the child, the boy or girl, the youth or maiden, man or woman — may learn to secure both enjoyments through the same effort, delighting in the activity which leads to a coveted result, however distant and difficult of attainment."

Preyer took up the study of the play-activity of his boy in exactly the same scientific spirit that he had taken up the study of the development of his senses, and found that much of children's play, even of so-called destructive play, was of the nature of experimenting. The child particularly delighted in producing all sorts of changes, without, as far as the adult could determine, any meaning in the changes themselves. That is, he did not do things because he desired a certain result, but because he enjoyed the activity itself — perhaps because of the sense of power he gained from being able to produce such changes. In the fifth month, his boy delighted in the crumpling of a sheet of paper. "From this time on to his third year he found great pleasure in the tearing and rolling up of newspapers. With similar pleasure he engaged in pulling a glove from side to side (until his fourth year), in pulling the hairs of my beard, in ringing a small bell for an insufferably long time. Later, he found enjoyment in the movement of his own body, in marching, and in purely intellectual plays, packing and unpacking of things, cutting with scissors, turning the leaves of a book, looking at pictures. At last, there came imagination, which animates clumsy pieces of wood, changes the leaves of trees into delicious articles of food, etc."

Although some kindergartners have practically held that all play should be directed play, this is not the teaching of Froebel. While he would have play directed, in general, so that it may be educative, and so that dangerous plays may be discouraged, he nowhere, so far as I have been able to discover, advocates the minute direction of details which has too often been the practice of his followers. The mothers who, giving their children some toys, suggest, if necessary, some little play, and then leave the children to work it out for themselves, seem to have hit upon the right method of procedure. Moreover, even suggestions should not be made except when the child is in a pet, or is for some reason, less able than

usual to make his own demands. As Jean Paul Richter says, speaking of adult interference in children's plays:—

"I dread that grown-up, hairy hand and fist which knocks on the tender, fructifying dust of childhood's blossoms and shakes the color off, first here, then there, so that the proper many-marked carnation may be formed. We often think to rule the external but broad empire of chance by means which some narrow accident has thrown together in ourselves."

In order to play in a manner which shall make it worthy of all these high encomiums, the child must be allowed to play under the right conditions. Fortunately, these are such that every mother, rich or poor, driven by work or languid with ill health, can afford them if she will — and she will when she realizes their importance. There are three great essentials — freedom, sympathy, and the right materials.

Freedom is the first essential, and in this particular the child of poverty often has an advantage over the child of wealth. There are few things in his home too good for him to play with, and he does not live in a narrowing prison of "don'ts" designed to protect the nerves and possessions of the finical elders of the household. He may be caught up and slapped abruptly, in the very midst of a beautiful time, and set down again, howling and bewildered, in his ruined world of joy; but he soon sallies forth again, on a fresh voyage of discovery, fairly secure in the preoccupation of the people about him. But the rich child, with his elaborate toys, is restricted to them. There seems no reason why he should want to use the brass rod at the foot of his bed for a gymnastic apparatus, thus scratching the brass and soiling the delicate spread, when he has a rocking-horse, covered with real hair, a horse which cost many dollars, standing invitingly near. Again and again is he reminded of the existence of the noble animal, and perhaps even forcibly lifted to its back, until he comes to regard it as an instrument of torture, and to refuse to play with it. Thereupon he is dubbed a naughty, ungrateful boy. In this way his world, which ought to be a miniature world of nature, with possibilities in it for all sorts of wholesome experiences, is narrowed to a toy-world, with room in it for only very few and limited experiences.

But if the child of wealth is often restricted by the very nature of his surroundings — and luxury is always unchildlike and artificial — the child of poverty is often restricted because no one has the time to play with him, and especially, not the time to take him out of doors. He is sometimes put into a baby-jumper, or, more often, his baby-buggy, and tied there. Moreover, when, having reached the age at which he graduates from these early restrictions and asserts, in troublesome and persistent fashion, his right to freedom, he comes running to the busy mother with something to show her, he is too often bid sharply to "Run along, now. Can't you see I am busy?" This does not hurt a

child the first, second, or third time, when he can and does perceive the importance of the mother's work, but it does hurt him — it deeply injures him — when it becomes habitual.

I know how almost impossible it is to steal a minute from absorbing work to smile patiently at the rambling explanations of the little boy and enter into the spirit of his play. Especially difficult is it to take one's mind from problems of one's own and enter into a child's trouble and help him to find a way out of it. One protests impatiently to oneself that children are stronger and better for being taught self-reliance, and that consideration of the rights of others is a lesson of such importance that one might be excused for teaching it in some heat of temper, at the moment when the importance of such consideration is vividly present to one's own mind. But, of course, such violent refusals are not teaching at all. Self-reliance is an adult virtue — so adult that few adults attain it — and it flourishes best where the child has the greatest freedom and the most sympathetic and wise assistance. The thwarted child may, and often does, lose confidence in himself and his dawning ability, and sit down inert and fretting, waiting for some one to take charge of the little self that he has so early found a burden. As for consideration of the rights of others, it is a lesson learned late, and best taught by example. The mother who is habitually considerate of her children — not indulgent, but considerate — will usually find them not lacking in consideration for her, as their power to appreciate her need grows upon them.

But however free a child may be, and however much intelligent sympathy his mother may show him, still he needs something to play with. He needs a mass of responsive material, capable of showing forth all the stages and varieties of his changing abilities. He needs, too, material that will be common to him and to the world about him, so that through the use of it he can learn to understand the properties of that world. Such materials are found in the four elements — earth, air, fire, and water. It is, of course, true, that all toys employ these four elements more or less, and that the traditional pleasures of mankind have consisted largely in play with them, but it is also true that the average mother conscientiously keeps her child away from them as much as possible.

The child has a natural love of the earth. A small mountain maid, in North Carolina, where the people sometimes gorge themselves with the white clay of the region, told me to notice how good the earth smelled after a rain; wasn't it just good enough to eat? It takes years of painful training — painful to both child and parent—to teach a child to regard dirty hands and face with anything but entire equanimity. Mud pies are a universal delight — and, at last, schoolmen are beginning to

recognize that they have a real educational value. Nothing is more wholesome than such close contact with mother earth, and the child who is dressed in overalls and set down to a nice little mud-puddle will be contented all day long.

Next to mud, comes sand. It is cleaner in appearance, and more available for the city child. A tray of sand, set upon a low table, which, in turn, is set upon a piece of oilcloth, should be in every nursery. It should be kept moist, so that it may be easily molded. Clay is more difficult to manage, indoors, because it gets dry and makes things very messy; but if a corner of a cellar, where there is a good light, can be given up to a strong table and a jar of clay (clay, like sand, should be kept moist), it will be found an unfailing resource for rainy days. The children should have long-sleeved aprons, fastened by one button at the neck, hung near the table, so that it is easy to put them on. In connection with the clay, colored chalks may be used. Painted clay may not be very artistic, but in following his pleasure in coloring the clay apples or animals he has made, the child is following the development of the race. Primitive peoples very generally color their statues, and it is said that even the beautiful statues of Greece were originally colored.

All children pass through a digging stage, which should be given free swing. It develops their muscles and keeps them at healthful and constructive work. My own children spent three blissful summers chiefly in one corner of the yard. The first year, when the eldest boy was seven, and the others, at two years' intervals, diminished in age to the baby a year old, they all dug a well, the baby using his little hands and, occasionally, a big kitchen spoon. As we lived near the lake, and the soil was light and sandy, they actually succeeded in reaching water at a depth of about five feet. Imagine the delight, the sense of splendid achievement! Every oozing drop was precious. The little girl dug with the boys, wearing overalls like them, her long curls tucked away safely under her sunbonnet. They were barefooted, and it was funny to watch how their toes wiggled and squirmed with delight and interest as they reached now a layer of "gold sand" as they called it, and now one of "iron sand," now one of nondescript gravel and china, the *débris* of the house-building. Presently, however, Jack Frost came along, and drove them indoors, making the ground too hard to dig.

The next summer, they put some old boards across half of the hole. During the winter, some of the earth had fallen back and choked

the water, and the task of digging down again did not appeal to them; so they covered the hole as I have said, piling earth upon the boards and leaving an opening big enough to admit their bodies. Now they had a cave, to which they descended by means of the ladder from their hook-and-ladder outfit. Ambition growing by what it fed on, they made a fireplace of some stones. But the smoke filled the cave and drove them choking into the open, thus discovering the necessity for a chimney. Promptly, they proceeded to make one, one child from within burrowing outward, another from without burrowing in to meet him. They miscalculated, tried it again, failed, found the need of some sort of measurement, and at last succeeded, their two hands meeting triumphantly in the middle of the pile of earth. Then an old stovepipe was found and put through the opening, and lo! it was possible to sit within and fry potatoes in comparative comfort. Eaten at the dining-room table, in the unexhilarating atmosphere of every-day respectability, the slices of half-raw potato might have been found unpalatable, but eaten in the cave, even the sand with which they were sprinkled did not detract from their flavor.

Again came the winter, putting a stop to all this delightful primitive experience. With the fresh start of life the next spring, however, came the birth of a new idea. The cave was widened and partly filled up, and the wide basin filled with water. Behold a pond! Various things, such as frogs, minnows, and a solitary turtle, were cordially invited to remain therein, but the water proved too unreliable. Morning after morning the children found that the thirsty sand had drunk it all up, and instead of a pond there was only a wet hole in the ground. Then came father to the rescue, and had it lined with cement, with a piece of drainpipe at one end. Fresh water was supplied every morning, the children not at all objecting to the duty of playing the hose on the diminished pond until it was full again. Once a week, all the water was allowed to drain off, and the basin was scrubbed with brooms, the children again being willing laborers. The pond being in this condition, it could be and was used as an outdoor bath-tub. The hose supplied the shower, and almost every afternoon during the long summer the children donned their bathing suits and splashed about in the sun-warmed water with great enjoyment. Here was one of nature's playthings, proving itself a practically inexhaustible source of enjoyment and stimulator of growth. The cost, up to the time of cementing, was practically nothing.

Of course, every child should have a garden. Nothing except flats or boarding houses can justify parents in keeping from their children this source of delight, this great educator. Of course, no child brought up in a city flat or boarding house can lead a full normal existence, and therefore he needs a garden only the more. If he have nothing but a window-box, let him plant that, water it, care for it, and have for his very own the resultant flowers or vegetables. The New York College of Agriculture has a little pamphlet advocating the use of egg-shell farms in the schoolroom, and such a toy garden ought not to be out of the reach of the most city-cramped child. It consists of a number of half egg shells, set in a pan of sand. The shells are filled with sand, and are really little flowerpots. In the schoolroom, each shell bears its owner's name, written upon it, and in a family where there are a number of children the same device might prove helpful. In the shells are planted peas and beans, corn, or even, if you like, little flowers that grow easily, such as sweet alyssum or oxalis. The little pan of shells is set in a sunny window and watered every day, and the growth of the different plants is watched and compared. Even where children have outdoor gardens, this little farm, or the pan of sand itself, may be found useful for starting the seeds of early vegetables and flowers.

Children's gardens should not be held in common, but each child should have a plat of his own, plainly divided off from those of the others. Indistinct boundary lines are the cause of many childish, as well as national, disputes, and are to be avoided both by wise parents and prudent governments. The product of the child's garden should be entirely his. It is well that he should have the privilege of selling to the house the things he is successful in raising, even though he sells at a considerable advance upon market prices. I remember well what utter bliss sat upon the features of my seven-year-old son, as he watched the entire family dining frugally on his first potato, the while he fondly cherished the penny it had cost us.

But while a garden is an admirable way to initiate children into the advantages of earning their own money with the labor of their hands, it should not be an entirely utilitarian affair. It is as necessary that James should learn the ways of delicate courtesy as the ways of industry and business; therefore let him devote a portion of his garden to flowers, and give them to his friends and members of the family. This little corner might be called his love-garden, and he ought to feel that its products are not for sale, but for blessing. Do not make the mistake of giving your little daughter the flower-garden and your boys the vegetable garden. If you had to make any such distinction, you would better give the flowers to the boys and the vegetables to the girls, for the boys will harden into business habits through the force of the world they will

enter, but the girls may need some training in this direction. James will need to have the loving impulses, as natural to him as to his sister, kept alive by all manner of beautiful opportunities for expressing them. But since, fortunately, no distinctions at all need be made, let both boys and girls have gardens of mingled vegetables and flowers.

It is not enough to give the children a bit of ground and some seeds. You will need to help on the work yourself at first, and to keep a watchful eye upon it all the time. A neglected garden, gone to weed, cluttered with dead and dying plants, is not only an offense, but an injury to the child. Yet it is too much to expect of him that he will be regular in his attentions to it without reminder from you, at least during the first year. He does not know — nor can all your words make him know — the relation his care of the garden bears to its ultimate success. I mean that he does not know it with sufficient force to overcome the force of temptation to play when he ought to be weeding or watering his garden.

Help him to acquire this knowledge by experience — not by the discouraging experience of failure, usually too severe a lesson for a young child, but by the experience of success. Don't drive him to work, or set an hour and hold him to it. If you do, the garden will soon cease to be a joy, and in ceasing to be a joy will lose half its power to help him. Instead, go with him to the garden, admire it, work in it a little yourself, and, if possible, get him to set an hour when he thinks it ought to be attended to. Help him to remember the hour and to plan for it, but do not be too rigid. It really is not a matter of great importance to the garden if it waits till afternoon, in order to enable him to go fishing with the boys in the morning. He knows this, and if you keep him at home, he will feel that your decision has been arbitrary and unkind; you will not have gained half so much in the way of teaching him regular habits as you will have lost in the way of good understanding and friendliness. After all, regular habits are often much overrated. It is as important to the success of a man or woman to be able to break away from regular habits when necessary as to keep them when desirable. The man or woman who is thrown all out of gear by the upsetting of the usual routine of life is a sorry spectacle, and an unpleasant member of any family.

There is another royal plaything free to all — the air. In his Mother-plays Froebel gives the "Song of the Weather-vane" as a suggestion of the use to which this element can be put. The mother, holding the child on her lap, turns her hand slowly as the weather-vane turns. Of course, if the child has never seen a weather-vane, this will be quite a meaningless performance, but if he has seen it, and had it named to him, he will watch the slowly turning hand with fascinated eyes — the eyes of the poet, seeing not the hand, but what it represents. Miss

Poulsson's little verse is sufficient to express his thought. The mother sings: —

"This way, that way,
Turns the weather-vane,
This way, that way,
Turns and turns again.
Turning, pointing, ever showing
How the merry wind is blowing."

In the quaint picture accompanying this song, the wind is shown blowing the trees, the arms of the windmill, a flag, a kite, the children's hair and clothes, a handkerchief held out to catch it, a pin-wheel, and the washing upon the line. The child, looking at the picture, sees the same invisible cause producing all these various effects; then he looks at the world outside and verifies the picture. He wonders. He begins to be moved by the mystery of the world. Robert Louis Stevenson, in his "Wind-song," well describes the child's feeling of wonder and his natural attempt to explain the cause:

"I saw the different things you did,"

sings the child to the wind,

"But always felt yourself you hid.
I felt you push, I heard you call.
I could not see yourself at all.

"Oh, you that are so strong and cold,
Oh, Blower, are you young or old?
Are you a beast of field and tree?
Or just a great strong child, like me?"

The interest in the mysterious power of the air explains in part the child's delight in kite and balloon. Soap-bubbles combine this element with water in a fascinating, if evanescent, fashion. Boys delight to rig up little windmills when they come to the age of invention and construction. Before that time, the little pin-wheels made of colored paper and stuck by means of a pin upon the end of a whittled stick, are among the most satisfactory toys that a child can make for himself.

Perhaps the very first thing a baby learns to play with is water. Nearly all the records show the child smiling and laughing in the bath as one of the earliest signs of pleasure. Before he fairly knows the use of his hands and legs, or the true meaning of play, he joyously tosses his little limbs in the water and crows with delight as the shining drops leap high in the air, and fall back upon him. He sucks the sponge, and so feels the liquid with his best organ of touch. A few months later, he will take endless satisfaction in pouring water out of a little tin cup.

One of the surest ways of amusing a child, when one has a piece of work on hand that will absorb all one's attention and when one is therefore desirous that the baby's attention, also, should be absorbed, is to put an old woolen gown on him, roll his sleeves high, and set him down before his own bath tub, filled with water. A sponge and a tin cup will add to the pleasure, as will also a few bits of wood and some paper, but these adjuncts may be wisely added one by one, as the child tires of the simpler amusement. When he is a little older, what my children call "solid soapsuds" will be an amusement, provided at the expense of saving up the bits of soap left at the last of the cake. The little people like to swish and swash these bits about in the water until they disappear and a splendid foamy mass of suds takes their place. Then let them have a few empty bottles or bowls and put the seemingly solid mass away to see what becomes of it. Still older children delight in adding colors to the soapy mass, by washing in the suds bright pieces of calico or ribbon — anything with a brilliant color warranted to run.

As for soap bubbles, there are now several ingenious little toys designed for the purpose of varying this charming amusement. One very useful little affair contains its own soapsuds, and can be successfully used by a child recovering from illness and just sitting up in bed. It requires some skill, however, so that no little convalescent under four years of age could get much satisfaction from it.

Children love to sprinkle the grass with the hose, or to water the flowers with the sprinkling can. The little metal fishes, and ducks, and boats, which may be drawn about in the water by means of a magnet, are also pleasurable, up to the time when the growing child demands the toy boat with sails and a lead keel, ready to be launched upon the real river or pond. Also, he must go fishing, if only, like Simple Simon, "in his mother's pail," and later, he must go wading and swimming and skating. Water is always his playfellow, loved in that capacity, though often detested as a nurse.

What shall the mother do with this strong, natural tendency? Shall she oppose herself to it, because it is inconvenient, and even, when the swimming and skating stage is reached, dangerous? She might as well save her strength. There never lived a child to vigorous manhood who could successfully be kept away from the water; and yet, I suppose, if all the floggings that have been given with the intent to defeat this proclivity, could be gathered together, and put with the tears shed by discouraged parents and children, they would make a very fair Inferno. And still the river calls and the children obey the call. What then?

Shall the mother waste her pleadings and her threats, force a break in the sympathy between herself and her child, or face the situation and make the best of it?

This is the place for true, directed play. Let the child once feel that you are on his side, that you like to have him play with water, because you sympathize with the pleasure it gives him, and that you will contrive to make it safe for him whenever it is possible, and he will bear with the inevitable refusal when it does come. He will know that you are not simply "fussy," but truly desirous of his welfare, and willing to take a little trouble to make it possible for him to do safely that which he longs to do, and which he can do with your help.

If water is troublesome, how about fire? Children find the same delight in playing with fire as in playing with the other elements. Miss Shinn reports that the first act of her little niece that showed the dawn of voluntary control over the muscles, was a clinging of her eyes to the flame of a candle at the end of the second week. All her "Biography" goes to show that the sense of light and the pleasure in it is the chief incentive to the baby's intellectual development. Certainly, all observers will testify to the extraordinary attraction light and fire have for even very young children,— a delight which does not at all disappear as life advances. For do not we children of a larger growth illumine our ballrooms and our dinner tables? Are not our streets hung with electric lights on festive occasions, and do not advertisers find all manner of wheeling, changing lights of service in attracting the attention of passing crowds? When we celebrate national events, we use fireworks. We light our World's Fair and our *fêtes* with fairy lamps and Japanese lanterns. We elect our presidents with the aid of torchlight processions, and, when the election is over, jubilate around bonfires. Why, then, should we wonder at the child's delight, and set ourselves to thwart the proclivity which he comes by honestly?

Of course, fire in itself is dangerous, and the little child must be taught this fact as expeditiously and economically as possible. The creeping child is already in danger of investigating the lamp and the fireplace too closely. Therefore seize the first opportunity to let him burn himself a tiny, salutary burn. Holding him on your lap, show him as plainly as you can that the lamp globe is hot. It is not hot enough to injure the delicate little hand, but quite warm enough to be very unpleasant to the sensitive nerves. If the child still persists in trying to reach the shining thing,— as he will, no matter how you say "No, no," and put your hand on the lamp and draw it sharply away with expressions of dismay,— then, warningly repeating "Hot! Hot!" let him touch it. When he cries at the result, kiss the little hand and let him kiss yours, comforting each other, and repeat, over and over

"Hot! Hot!" so that he learns to associate the word with the unpleasant sensation. Usually one such lesson will suffice to make him let alone whatever you tell him is hot. But let not that lead you to deceive him and call things hot which are not hot, but which you do not want him to touch. He will soon discover that you are lying, and will never again trust you so fully. If, however, the lesson should need repeating, repeat it, as nearly as possible in the very same way, so as to gain the advantage of the first performance to reinforce the second.

But fire may still be played with safely, under proper regulation. Bonfires, with mother and father in attendance, are safe enough, and prevent unlawful bonfires behind the barn, without the safeguard of watchful elders. The simple rule should be that none of the children may play with fire except with mother's or father's permission; and that permission should be granted as often as possible, in order that the children may be encouraged to ask for it.

A stick reduced to a burning coal at one end, waved about in circles and ellipses, is not a very dangerous plaything when elders are by, but it is dangerous if played with in secret, when Mary may be tempted to hide it behind her inflammable dress at the sound of a suddenly-opening door. Playing with fire on the sly is the most dangerous thing a child can do; and play on the sly he will unless he is permitted to do it in the open.

There are various little fiery amusements which children discover for themselves, and which the wise mother will permit, foreseeing more than inconvenience if she does not. They like to light matches and drop them into a basin of water. If they save up money to buy the box of matches, there is no legitimate objection to this amusement, and the requirement to buy their own matches furnishes a sufficient check upon the frequency of the demand. A really very beautiful game can be made from a number of Christmas-tree candles of various colors and a bowl of water — preferably, a bowl for each child. The candles are lighted, and the wax, being dropped into the water, forms little colored circles which float about. Presently it will occur to some child to drop the wax in such a fashion as to form figures and letters. These may be lifted out and preserved on sheets of paper.

Of course, every child sometime will have a magic-lantern. Now that one can be had in satisfactory shape for only seventy-five cents, no child should be deprived of the happiness of owning one. If well cared for, with the slides added to from time to time, it is a most satisfying toy.

Every one knows the charm of a Jack o'Lantern, but every one does not know that very attractive little ones can be made of orange skins instead of the traditional pumpkins. It is easy to cut the top off an

orange, scrape out the contents for use in orange cake or orangeade, cut holes in the skin for eyes, nose, and mouth, and place a Christmas-tree candle within. If the whole thing be mounted, by means of a tack through the bottom, upon a whittled piece of kindling-wood for a pole, it makes a perfectly safe and charming toy. The older children can make them for the younger, and then the whole family can parade in the dusk of evening, a procession of little yellow imps, grinning and shining in the darkness.

Children's plays, Plato thought, should be regulated by music, and with this Froebel agreed. Of course, all plays cannot be so regulated, nor would it be well if they could. But when children have come to the quarrelsome age, the age when the younger members of the flock assert a disconcerting right to their own freedom, and the hitherto dominant elders object, the habit of playing silently together to the sound of music for a half hour each evening before going to bed will be found wonderfully helpful. Even during the day, when the friction is unusually severe, a few minutes' skip to the notes of the piano will often restore harmony. It is as if the regulation of the body according to the laws of rhythmic and orderly motion reacted upon the mind and nerves and regulated them harmoniously. But the exercise in the evening is particularly valuable. The children go to sleep under the influence of a harmonious suggestion, and waken in the morning inclined to be peaceful and happy.

Perhaps the most useful play for this purpose is the pantomime. The mother plays or hums the air of certain songs which the children know. They have to guess what the songs are, and show what their guess is in pantomime. Having guessed it correctly, they all proceed, in silence, to play it. Perhaps it is a windmill song: the little arms fly round and round in time to the music, now fast, now slow, as the wind increases or dies away. Perhaps it is a spring-song: the children are birds building their nests. They may be shoemakers, blacksmiths, galloping horses, a woman at the spinning-wheel, or soldiers marching gayly by.

Then there is dancing. Jean Paul Richter exclaims, "I know not whether I should most deprecate children's balls, or most praise children's dances," and adds, "Further, the harmony connected with it [dancing] imparts to the affections and the mind that material order which reveals the highest, and regulates the beat of the pulse, the step, and even the thoughts. Music is the meter of this poetic movement, and is an invisible dance, as dancing is a silent music. Finally, this also ranks among the advantages of this eye and heel pleasure; that children with children, by no harder canon than the musical, light as sound, may be joined in a rosebud feast without thorns or strife."

The dances may be of the simplest. "Ring around a Rosy," "Here We Go, To and Fro," "Old Dan Tucker," and the "Virginia Reel" are excellent dances, suited for various ages in the order given. Miss Allen, of the School of Education of the University of Chicago, has taken the common hippity-hop of children and devised from it a variety of helpful rhythmical dances: there is the plain skip, the skip with a run, the sidewise glide in couples, like a two-step, and so forth. A very young child takes pleasure in simply jumping up and down in time to the music, later in marching and running, then in hopping, then skipping, and so on until he gains such motor control that it is easy to teach him any dance.

All kinds of dramatic plays are of the utmost value in developing the child. In them, he not only expresses the ideas he has gained of the world about him, and by expression clears and deepens impressions, but he becomes a master of his own ideas, he creates a world of his own, a living, breathing world, in which he tries on the nature now of animal, bird, or beast, now of tree or train of cars. He discovers, as it were, through dramatic play, his true relation to each of these things, by taking their nature upon him, and finding what is held in common between them. He saves the outer world to his consciousness — his world of spirit — by taking its nature upon him, and entering into its life.

The dramatic plays often connect directly with the work-plays. The child plays he is a carpenter; he soon desires to have tools, board, nails. This is the beginning of manual training. Get him, not a toy tool-chest, with flimsy and easily-spoiled tools, but a saw that will cut, a small, strong hammer, some tacks and nails, and see that he has some soft, easily-worked wood at hand. An old soap-box, split up, gives useful material. Help him in his first attempts, with your advice, and, sometimes, with your strength and skill. Give him a place that is convenient to keep his tools, and see that he keeps them put away when not in use. A little insistence upon this point while the tools and his zeal are new will form the right habit almost at once, while if that period of natural interest be allowed to pass unused, it will be difficult to teach him.

Boys, as well as girls, should know how to sew, and, if it were not for the fear of ridicule, they would be as glad to learn. Advanced schools today are teaching boys to sew, because of the educational value of this simple constructive activity. Often a boy will cheerfully sew upon the

machine when it is difficult to induce him to sew by hand. He will thus be led to do the necessary hand-work in order to prepare articles for the machine, or to finish them after they have left the machine. He will cheerfully make himself a marble-bag, or his mother a pincushion, when he would scorn the idea of making a dress for his sister's doll, or for his own hidden and neglected one. Girls, too, delight in the machine, and should be allowed to use it. A knowledge of mechanics is as useful to the woman as to the man, and if the love for it, which is not an affair of sex at all, but common to both sexes, were more commonly fostered in the girl as it is in the boy, women would not be so helpless in their own households. If the mother's machine is new and she is afraid to trust it to the tender mercies of the children, let her buy one of the inexpensive little toy sewing machines, that are capable of doing really satisfactory work on a small scale.

In these occupations one sees the natural transition from play to work. As Froebel says, "What formerly the child did only for the sake of the activity, the boy now does for the sake of the results or product of his activity." He adds that this is the time when the child begins to share with eagerness the work of father and mother, and, in impressive words, he urges the parents to be careful lest they, in rejecting the help so freely offered, destroy the instinct of formative activity in their children. "The child, so refused, becomes indolent," he says, "spirit and life cease to animate his physical being; the latter becomes a mere body to him, which now he must carry as a burden; whereas formerly, the sense of power led him to feel his body, not as such, but as the mighty source of the power that filled him."

It is an amazing thought that the beginnings of all these mighty things are worked out through the child's natural impulse to play, but whenever an instinct is found to be universal, and so strong as to compel its gratification under the most diverse circumstances, we are justified in supposing that it has an important function to perform in the development of the race. Therefore, when we find that savage tribes, all the ancient civilizations, every people, in fact, down to our own times, have recognized this instinct and made toys to meet its demands, we feel that the opinion of Froebel in regard to its importance has been confirmed.

In the ruins of ancient Egypt, excavators find that the children were well supplied with toys; the oldest Chinese civilization had them; the boys of Plato's time learned to "whip the top that is nearest you"; little Macedonian girls, who lived when the world was ringing with the praise of Alexander, played with dolls and housekeeping toys; and at that time, as now, the little ones of savage tribes collected shells and nuts, and other natural objects for playthings.

Anthropologists claim that the characteristics of a nation are expressed in the toys it manufactures, and to prove this remind us that French toys are either military, or mechanically perfect, or very finely finished; that their dolls follow changes of fashion, that German toys are homely, stout, and unbeautiful; that Chinese toys are wonderful and grotesque: the Japanese, dainty, fanciful and artistic, while the American toys are largely mechanical, and many of them very costly, showing our national bent for invention, and our national extravagance. If it be a fact that toys express national traits, it is a much more important truth that they help to form and fix them. The choice of toys is, therefore, a matter of great importance in the training of individual children. If French toys arouse the spirit of military glory, or the taste for frivolities; if those made in Germany inculcate the sturdy German virtues, together with some dullness as to art and finer matters; if the English doll or cart implants good, homely English traits, and Japanese toys teach a little of the simple-hearted cheer of that people, along with their universal art-feeling, we should be careful to select them according to the needs and deficiencies of each particular child. As it is, do we not unconsciously cultivate the many-sidedness of character peculiar to Americans, by bestowing upon our children the toy products of every nation which can reach our markets?

If the educational value of toys and the child's pleasure in them depended in any degree upon their costliness, we might doubt that they are a natural educational means. But like the wind and the clouds, like the child's own active and responsive members, playthings are as easy to find as the love of them is universal. The baby finds his first ones in his own fingers and toes, later he finds them in every object with which he comes in interested contact. Have we not all seen a little child running against the wind, show more joy, of a natural, spontaneous, and healthful kind, than the envied rider of a pony, or driver of a tiny luxurious carriage? It is true the boy on the pony, or the girl in her carriage, shows very great delight, but is it the free expression of abounding life? Is it not, rather, the envy which they excite, the pride of ownership, the consciousness of admiration, which are the source of their pleasure? The difference lies in the quality of the enjoyment. Nature, however, looks after all her children, and the little lad who rides the pony may often have the impulse to measure strength with the winds, while the child of poverty can never be robbed of his dream of some day riding a pony.

When the faculty of imitation begins to stir, it is in his play and his ways with playthings that the child gives out the impressions which he has been gathering from his surroundings, and the example of his elders. Why does the baby girl whip her doll? Why does the little boy find his whip the chief delight of stick-riding? This view of maternal obligations is not born into little girls with the mother instinct; and perhaps no little boy, however strong his natural sense of man's dominion over the beasts, would know the purpose of a whip if he had never seen one used. A doll may be used to cultivate in the little girl the qualities of tenderness, sympathy, careful service, and devotion, all necessary to her life-work as mother, nurse, and teacher. Why might not the boy be trained to care for the stick-horse and to learn through it the right of animals to the sympathy and protection of man?

But neither doll nor horse will convey the deepest lesson where the example of mother and father shows that they themselves have failed to learn it. This is, after all, the great and pitiful inequality of fortune, that all children cannot be brought up by wise and good parents, in pure and noble homes.

LIST OF TOYS SUITABLE FOR VARIOUS AGES

[This list is purposely made short, simple, and inexpensive. It is within the reach of parents of very moderate incomes, yet includes all the toys which children love best, and all that have any important influence on their education.]

Ball and rubber ring	Within the first year
Soft animals and rag-dolls	Within the first year
Blocks and bell	1 year
Small chair and table	1½ years
Noah's ark	2 years
Picture books	2 years
Materials and instruments	2 to 3 years
Carts, stick-horses, and reins	2½ to 3 years
Boats, ships, engines, tin or wooden animals, dolls, dishes, broom, spade, sand-pile, bucket, etc	3 years
Hoop, games, and storybooks	5 years

THE ages indicated above are not arbitrary. Some children enjoy certain toys earlier than others, and this enjoyment should be the test of their readiness for them. To give children toys too old for them prevents enjoyment when they are ready for them, by taking away their novelty. Their educational value is also lessened, because they have lost the power of exciting wonder and the accompanying intel-

lectual activities. Toys are a child's first books, and he should have but few of them, in the beginning and only such as he can assimilate with his undeveloped powers.

The rubber ring can hardly be classed as a toy, but, excepting in the case of the baby fed from the bottle, it is generally the first object which the child learns to handle, and has great value in developing the power of grasping.

The ball, however, is a source of unmixed delight. What is the quality in it that so strongly attracts kittens, puppies, and babies? Have they some instinctive perception of its perfection in form? Or are they fascinated by the ball's power of motion, as it rolls about and seems to join like a sentient thing in their play? The small, soft, colored balls are best for the first toys. There is one kind, made of extremely thin and brilliantly dyed rubber, inflated with air, and almost without weight, which a child of eighteen months will thoroughly enjoy; but it will tantalize the baby of a younger age. It bounces so high and so easily that he can not control it. A smaller, cheaper ball, with some slight weight, to develop the muscles of the wrists, is more suitable for little children.

As to the question of color, the sharp contrast of pure colors makes a very strong impression upon the visual nerves. Children love deep and bright colors, but if they play continually with highly-colored objects their sensitiveness to finer shades and tints, and their pleasure in the softer gradations, may be dulled. However, babies do not always select the most gorgeous objects, and if they did, the momentary strong attraction would argue that the very strength of the impression might result in a dulled and wearied color sense. A toy that the child plays with as constantly as with the ball, may well be of neutral tints. Moreover, if it be of the natural pale gray of the rubber, undyed, it can be washed often and kept scrupulously clean.

The ball, in its various forms, is a toy that children are constant to in all ages. It is capable of supplying the place of all other toys, and has the greatest power of all to develop strength, to stimulate muscular and intellectual action, and to further a balanced growth of the body.

The small chair and table are placed next in order because they add greatly to the child's comfort, that best friend of growth and good-humor. They awaken the sense of ownership and a corresponding sense of the rights of others, and they give the child a recognized place in the family. These small belongings may also serve to convey the first lessons of care, neatness, unselfishness, and courtesy.

The soft animals and rag-dolls mentioned in the list may be of rudest home manufacture, and yet be most successful in delighting and educating. Indeed, it is best that they should be made at home, and the original pattern preserved, and adhered to. Children are very faithful in

their loves as well as keen to observe differences. It is pitiful to see the distress of a child when the beloved rag-doll has been made over, and her form or her countenance changed in the process. As babies almost invariably set their hearts upon the doll they know best, and therefore the doll which has been most handled, mothers may wisely make the soft animals and rag-dolls themselves in order that they may be often renewed when necessary. And as you love the child and would not wound his faithful heart, let him see as little change as possible in his made-over treasures. Remember that, whether you choose or not, toys educate, and the mission of this particular kind is to develop the affections, the consciousness of obligation to those dependent upon one, and the love of taking care of and protecting them.

The age of real pleasure in building-blocks varies. The average child is not able to build consciously by a pattern until a year and a half or two years old. Before that time, often at a year, he can lay the blocks in a row, or make simple combinations which he will name "a train" or "a house." Do not hurry his development in this respect. It requires many and complicated powers to enable the child to picture the object which he would build, to adjust the block-forms to this picture, and to lay them according to this conception. He must have long practice, first, in the mental processes involved, as well as in the manual skill. Build for him, sometimes, if you choose, but do not help him too much; allow him to get the benefit of helping himself. And when you have built — and it is almost sure to be some complicated form far beyond his interest — don't scold him for knocking it down. Remember that you have shown your powers, and it is baby's turn now to show his. His delight in the result of his effort is not in the least tinged with naughtiness; he only wanted to take a part in the play and could do nothing else so well. You will be wiser to build more simply, and to show him that there are more ways than one of knocking it down. Take out the block upon which your structure rests, and let it collapse, or remove the corner one, and let it "topple over," or roll the ball at it. He will get new ideas with each action.

The bell is a test of the mother's love. It will rack her nerves almost as much as it will delight the child's; but it is good for him. The nerve and brain stimulation and the training of muscles and ear are worth a sacrifice. The bell is the real attraction in a great variety of toys — from the simple bell on two wheels, which the baby just able to walk

delights in pulling or pushing about, to the large patrol wagon which charms the children of a whole neighborhood.

Sometimes the bell may be used to add attraction to a harmful toy. A mother who was a kindergartner was distressed at the influence of a large patrol wagon owned by a neighbor's son. The children were eager to play with it and cheerfully played drunk, or pretended to commit burglaries or even murders, in order to be arrested and admitted to the coveted privilege of a ride in the patrol wagon. She could not feel that such plays helped to upbuild the moral characters of the children, so she set herself to work to rob the patrol wagon of its votaries. For a long time she puzzled over the secret of its fascination. She knew, of course, that the dramatic nature of the play appealed to the children, but she soon became convinced that the fine gong which the driver of the wagon gaily sounded as he tore down the block after his thrilling victims, was the chief source of attraction. Therefore she gave her son a fire engine with a gong, and a hook-and-ladder with a gong, and a hose cart with a gong. Her neighbors joined with her and soon there was a well-organized fire company which drilled faithfully and rescued dogs, cats, and young children from every available building for blocks around. The patrol wagon became an insurance patrol, and the children of the neighberhood rejoiced in daily deeds of picturesque heroism.

But without going into such an elaborate play as this, children find infinite satisfaction in playing "choo-choo cars" with two or three chairs, a piece of string, and a bell. Without the bell the train is dull and voiceless; when its metallic clangor rises insistent on the air it spreads a glamour over the prosaic chairs, and lo! they speed swift and straight over hill and dale, carrying the happy child from one strange country to another. At another time, with a chair upon his back and a bell in his hand, he trudges patiently from one member of the family to another offering to grind knives and mend scissors. The doll dinner-party, too, is a magical feast, if the bell can be rung repeatedly for the willing maid. In a hundred ways this little instrument adds to the happiness of the child far more than it detracts from the happiness of the mother.

"What a pity it is, mamma," said a little boy whose mother had begged a few minutes' quiet for her irritable nerves, "that little boy's nerves, and grown-up people's nerves are made of such different stuff!"

Noah's ark is included in the list more from respect to its dignity as a traditional toy than from the belief that it is necessary. It has the advantage of including a good many objects in one toy, and is therefore fruitful of a great variety of amusement.

Materials and instruments mean, first, a pencil and paper; later, blunt scissors and paper and a blackboard, with chalk; a big needle with

thread tied in the eye, and "scraps"; a hammer and small nails and something to drive the nails into. Do not make the mistake of supposing that the pencil and paper are for drawing; the needle for sewing; or hammer and nails for carpentering. These may be the far-off results, but the first need is to train and strengthen the hand and to concentrate the powers of vision. These things in their turn nourish the brain, through exercise and the supply of blood. Remembering this, be guided by the child's tastes and the waxing and waning of his spontaneous interest, and do not expect him to remain too long absorbed in these pursuits, nor look for great results in them. If you will wisely praise what the child has done, you will stimulate and benefit him.

If the mother will pick up, date, and preserve, the scraps of paper upon which the baby has been "drawing," beginning with his first uncertain scribbling and continuing until he arrives at the drawing teacher, occasionally explaining the intention of the picture, or relating the story of its origin, she will have an invaluable and charming history of the early development of one faculty of her child's many-sided being.

The nursery blackboard is a great help to the training of the hand, as well as to the powers of observation and expression. It has an advantage over pencil and paper in that it employs the large muscles of the arm rather than the small ones of the fingers — a fact which, as shown in the chapter on manual training, is of great importance in the development of the child's brain. The broad space of the board, the large, showy results so easily attained, stimulate the child to fresh effort, and at the same time give him the satisfaction of accomplishment.

Carts are generally of little use until the child has learned to walk with certainty. The shoe box with a string attached is often preferred to a toy cart with wheels, and the child has good reasons for the choice. Wheels come off, stick fast, and catch on things. Besides, for some reason, the child is less willing to put forth the slight effort of imagination required to make a real cart out of a toy cart, which is like it, than the greater effort required to make one out of a box which has only a distant resemblance to it. There is, also, the constant likelihood that the toy cart will be broken, causing distress and dissatisfaction with its successor, because it is not exactly like it; but shoe boxes of all shapes and sizes have in the same degree the qualities which help the child to imagine them real carts, and may

therefore, be changed when soiled or broken, without disturbing the child's enjoyment of them.

The stick-horse, as elsewhere suggested, may be utilized to teach the child love and care for animals. Home-made reins are very good, and those strung with small sleigh-bells, a delight. Cart, stick-horse, and lines, are not necessarily boys' toys, exclusively; girls enjoy them, and they are the source of much healthful exercise. Their educational value lies in the fact that they enable the child to imitate the activities which he sees going on around him. Through this imitation he learns the value of labor, and much concerning the social relations. In imitating the motion and the pride of the prancing horse he shows a sense of the animal's instinctive nature, which is interesting; of all the horses which a child of three years old has seen, how few bear themselves so bravely, what a great proportion of them were, in reality, meek, spiritless beasts of burden! How does the child know of the freedom of motion, the spirit, and the pride of life which belongs to the horse in his natural state?

Boats and ships enlarge a child's knowledge of the world by the addition of seas and rivers to his geography; and with engines and trains develop the thought of man's dominion over it, in conquering distance and in uniting the wide-spread nations in one whole. The trains and steamships fly to and fro across the world like giant shuttles weaving the warp and woof of civilization. Of course this large thought is not perceived at three years, nor yet at six, but it begins to germinate, and the child, playing with his toy engine or boat, is preparing himself for later relations to the great forces of commerce, and to the interchange of national thoughts and customs.

The tin and wooden animals are really a form of dolls, and have about the same educational value. They also give some insight into animal nature and nourish sympathy with it, or may do so if the mother takes care that they are treated as kindly as if they really were the animals they represent. Dolls are often as dear to the little boy as to the little girl, and his love of them should be encouraged. Do not fathers as well as mothers need to have tenderness, affection, and devotion?

The small dishes and broom give the little woman the means of imitating the housewifely activities, and it will be well for our daughters hereafter if we take this opportunity to inculcate neatness, order, industry, and frugality. Some use may be made of toy dishes for teaching courtesy and "table manners." The little brothers should always be invited to the tea parties, and gently influenced to bear themselves like gentlemen there. But in all such teaching the play-spirit must be carefully guarded. The mother must never break through the

incognito of the child. There is nothing a child resents more intensely than any breaking of the spell of the play, and if the mother would influence her children through play, she must do it by entering into the play with them.

The other toys mentioned — spade, bucket, the sand-pile, etc. — are merely intended to introduce a world full of outdoor playthings. But these need to make the smallest drain of all upon the family purse. A shingle will serve for a shovel, and many things for a bucket. It is the sand, the sky, the open air, and the privilege of being active there which attract the child. And whatever attracts him teaches him.

Of the multiplicity of games on sale in toy shops, only a few are really enjoyed by children under twelve or fourteen. A few, such as ninepins, train eye and hand, and others, like parchesi, train the power to count quickly. By the process of selection — the child's — we find the old-fashioned games such as these, and a few others, like "snap," the only games of real use to small children.

As for story and picture books, they are, of course, an unfailing resource. However, they should come when the child is ready for them, not before. It is folly to force or persuade his attention to them before they can give him pleasure. And even after he begins to enjoy them, do not try to fix his attention upon them when it begins to wander. The mere act of looking, after his interest flags, is likely to weary the eye and overtax the brain. Little children cannot find pleasure in one thing for long, and are physically incapable of continued attention. With this proviso, the baby of six months will get much pleasure and profit from linen picture books, which he cannot tear. He will like to turn the leaves and see the bright colors long before he understands what the pictures are. Soon he will like to have mother show him the "moo-cow" and the "baa-lamb" and tell him about them. He will grow in knowledge of language as she talks to him, her words stealing softly into his half-attentive ear, while his conscious attention is riveted upon the picture. Children who have the same simple stories read to them again and again, mother's finger pointing out the words, unconsciously learn the appearance of words, and gain a familiarity with the letters which later on makes learning to read an easy task. And all this learning takes place without nerve or brain strain, because it is indirect, effected almost below the threshold of consciousness, under the gentle stimulus of a quiet pleasure.

After the age of four or five years the kindergarten gifts and games, or better, the kindergarten itself, furnishes so many avenues for the child's activities that toys become of less interest and importance. Later, when the more wearing school-life takes its place, they become, again, very necessary, because they furnish the needed relaxation for the over-

wearied mind. The age of toys should not be curtailed — indeed, it never passes entirely. The toys of mature life, though seldom so innocent, are as absorbing as the toys of childhood which they succeed.

The playthings which the child finds for himself, outdoors, preserve their delights longest in the memory. The playhouse in the beech-tree roots; the doll of small corn-ears, with their long and silken locks, and skirts of the lily; the cheeses of the hollyhocks; the blue-mailed violet knights; the cups of acorns; the brooms of switches; the caps and crowns of leaves pinned together with little twigs; the shelving rock that made a dark and sinister robbers' cave; the poke-berry ink; the feather brush; the canvas of bark or a broad lichen; — were not these and their like a thousand times dearer and more fruitful than any other toys our childhood knew? Let our children try them in their turn, their lungs and spirits expanding in the grapevine swing, their inheritance of man's exploring instinct developing in the still, strange recesses of the woods. Let them navigate the streams and ditches; let them try to subdue the ice on skates; let them taste pioneer life in the cinders of potatoes roasted at their camp-fire; let them climb the trees and feel — to a degree —

"Like some watcher of the skies
When a new planet swims into his ken."

No toys that you can purchase, no lessons you can teach can ever make up for the delights denied and the culture missed by the child who has not nature for his playmate and her gifts for his toys.

Very interesting in this connection is the subject of "invisible playmates," the companions which lonely children often create in their imagination, to whom they give an amazing individuality, and whom they love with faithful, and to adults, pathetic affection. It is oftenest the "only" child who does this; but sometimes, the sensitive or delicate one of a large family, feeling some deficiency, perhaps, in his brothers and sisters, or in his relations with them, creates a companion who is the source of more happiness, and, seemingly, the object of more affection than the flesh and blood children. Scientists will doubtless evolve a theory for this strange manifestation of child nature, but mothers are chiefly concerned to know just how it affects the individual child and whether it harms or benefits him. There is something eerie about it. We instinctively feel that it borders on the morbid and abnormal, and while some delight in it as an example of some peculiar claim to attention in their children, most mothers discourage or ignore it.

At first the child makes few and timid references to his invisible companion, but even when he first begins to speak of her, or him, at all, it is

likely that the image is quite distinct in his mind, showing that it has long been there. Later, he will speak more and more freely of her, and can often be overheard in talking or playing with her. The only, and lonely, boy will create for himself a sister; and some children even imagine two companions of distinct form and characteristics.

When the impression is strongest the child will play for hours with his dream sister; he will divide his toys with her and put aside for her a share of his candies, he will gather flowers for her, make things for her, offer her the first drink and the best chair. At table he will sometimes be seen to offer food, as to one who sat beside him, and those whom he trusts may learn that she is always dressed in his favorite color.

One little boy of five described his imaginary sister, whom he called "Annie" (for no reason which could be discovered), as having long hair, big eyes, a "laughing face" and round cheeks, and wearing a "pretty blue dress." If he was being dressed to go out, he always told Annie how to amuse herself in his absence, and begged her not to be lonesome. He explained that he did not want to take her because she was "afraid of dogs," which he was not.

Distinct as is the child's impression of the personality which he has imagined and great as his pleasure in it is, it fades away in time, perhaps when Nature no longer needs it for her course of training. Mothers, since they do not understand this manifestation of the child's nature, should be very careful in dealing with it. To talk too much about it with the child, as if it were a thing in which she can share, would deepen the delusion; on the other hand, to laugh at it, or to use her authority to crush it would be, in different ways, an injury to the child's individuality. To discuss it with her friends, to make it a source of amusement, or of entertainment, is the cruelest, most unmotherly course of all. The child has his secret and sacred inner life. If he permits his mother to share it, it is because he trusts her. Will she betray this trust in order to gratify her maternal vanity or to lend interest to her conversation?

Generally, the mother, keeping his counsel, bethinks herself that her child is too much alone, and furnishes him with motives for new activities and more companions of his own age.

KATE E. BLAKE.

AMUSEMENTS FOR A RAINY DAY

WHEN we awaken in the gray light of a stormy morning, to hear the rain driving against the windows, let us rejoice if we may spend the day indoors, for here is an opportunity to look, with the children, into some of the wonders, and the uses, of the water so ceaselessly falling — one of the most beautiful things in all creation.

"Beautiful!" they may exclaim, "why it has neither color nor perfume; there is nothing at all wonderful about it!"

Tell them, then, to think of it shining in the dewdrop, the exquisite little globule that hangs like a jewel from grass blade or flower petal. Then remind them that water is the lens through which the beautiful arch of the rainbow is formed, at the sight of which the smallest child will clap his little hands with delight. This is a good time, too, to tell, with the help of strips of bright-hued paper, of the seven primary colors. Arrange the colored strips in their proper order,—violet, indigo, blue, green, yellow, orange, and red; let the little ones look at them for several minutes, then mix the bits of paper together and let each child try to form the arch for himself, until the order of the colors is thoroughly learned.

But water has many other beautiful forms. Let them see it, in thought, sparkling and spraying, in the mighty waterfall that plunges from rock to rock. Not only describe the waterfall, but bring out pictures of the great cataract of Niagara, and of the beautiful falls of Yosemite; one of these pictures may be found in every home. Read to them Southey's poem, "How the Water Comes Down at Lodore," and they will enjoy it for its musical swing as much as for the meaning of the words. Then tell your little ones how water, under the touch of cold, crystallizes into a thousand forms of sparkling beauty, in snow, ice and frost. There are also the beautiful fleecy white clouds, floating in feathery lightness over the deep blue sky, with nothing in their composition but water.

Then, to show of how many things water is a part, you might ask the children to name some articles of food which they think do not contain it. "Apples," they may say, "tomatoes," "potatoes," "meat"; when they are informed that all fruits, vegetables, and meats, contain water, they will realize more than ever in how many ways they are daily absorbing it.

In speaking of water as indispensable to life, tell them of our satellite, the moon, from which all moisture has evaporated, until she swings on her axis, dry, barren, and uninhabited.

Tell them the adventures of "Pearly," the dewdrop, who is caught up in a chariot of sunbeams from his pink velvet couch of rose-petals, and who sails around, in company with thousands of other dewdrops, until, meeting a cold blast, they are, all together, rudely dashed down to earth. Pearly, perhaps, falls on the mountain-side, and, trickling down, joins a little rill that ripples on to join a great river, on whose broad breast he is borne to the ocean. Then his travels in cloudland begin again.

When we consider it, the variations in the weather are caused entirely by the changes in the form of water. In explaining the phe-

nomena of electricity, tell them that the clouds move back and forth until they become heavily charged with electricity, and that the excess of electricity in the clouds, passes over to the earth. The sparks that sometimes fly from pussy's back when she is stroked, are caused by the same force as is the terrible lightning. Tell them of this wonderful force, and of the mighty work it has helped man to do—from lighting his house to carrying his messages beneath the great ocean.

But we have not yet spoken of the kinds of water. The children have learned, no doubt, that the ocean is composed of salt water. Mineral water they have probably seen bubbling in bottles, if not in its native springs. Lime water may have been given to them as a medicine, and they have all heard of "hard" water and "soft" water, and of the superior merits of the latter for washing purposes. Get these facts from them, telling them nothing that they know themselves.

You might also ask the children to enumerate the tasks performed by water, from the turning of the millwheel to the running of the locomotive. Tell them of artesian wells, bored through several strata of rock until the purest water, deeply imprisoned between impervious clay beds, gushes up to the sunlight.

Tell them of the hot springs and the wonderful geysers in Yellowstone Park, showing pictures to aid you, if possible; and describe the periodical eruptions of the geysers and the shooting upward of the water, in columns from fifty to one hundred feet in height.

The wonderful relation between water and vegetable growth, the child who has watered his mother's plants and who has learned the rhyme "April showers bring May flowers," has realized to some extent, but try to make him realize that without water our home, the earth, would be swinging in space, lifeless, and desolate. Then he will welcome the rainy day, especially if, as should be done, several favorite games and playthings are reserved by the parents for this weather only. An amusing game for such a day, is "Water-dwellers." In playing this, one of the company stands in the center of the room and says rapidly, "Fish live in water, ducks swim in water, eels live in water, pigs live in water." For each correct statement, the players should raise hands. If one should raise his hands at a wrong statement, like the last, for instance, he in turn becomes the leader and continues the game by saying, perhaps, "Whales live in

water, frogs live in water, seals live in water, cats live in water." The next player who is caught takes his place as leader. The game, if somewhat simple, is at least productive of much mirth and requires quick thought.

A most absorbing amusement for the little ones on a rainy day is the pasting of pictures in a scrap-book, and a very fascinating book of this sort is called a house-book, each page representing a room. The books may be home-made and should contain from ten to sixteen pages; and each little furnisher, to enjoy it thoroughly, must have a whole "house" to himself. Furniture may be cut from catalogues and premium lists, which will be found to contain many pictures useful for this purpose. The cover of the book is of pasteboard; and if the little owner wishes, it may be painted red and ruled in rectangles to simulate a brick house, while the windows are easily drawn on both covers.

The first room, of course, is the hall. A piece of wall paper of a bright color may be put down for a carpet; hat-trees and a low seat may be found in the catalogue and pictures of winding stairs may be taken from old newspapers, or magazines. It is better to leave a room half finished until the right material comes to light, than to put into it something that does not look well with the other furnishings. All of the rooms may be carpeted with wall paper, or with pictures of rugs, and the walls should be papered with thin papers in plain, bright colors. Pictures of a piano, piano lamp and a handsome set of furniture might adorn the parlor; but if each child exercises his own taste in the furnishing, he will find greater enjoyment in the work. When the rooms are finished, paste here and there pretty figures of boys and girls, of a proportionate height, and you will be surprised to see how naturally they fit in.

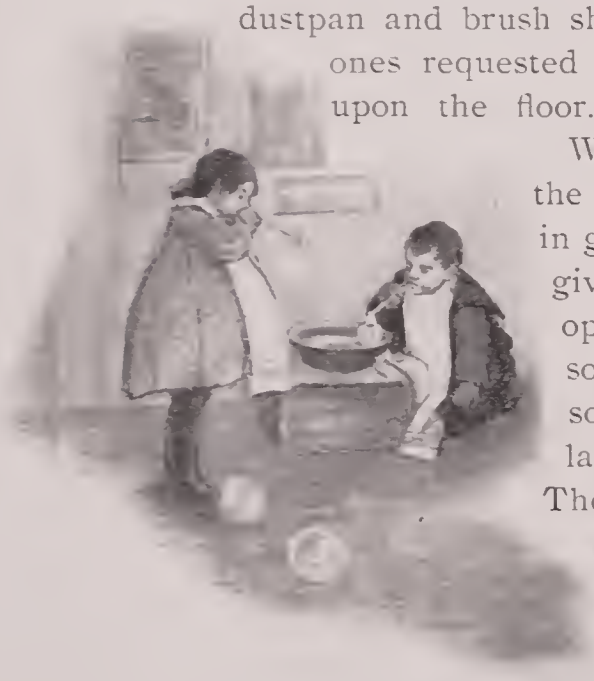
Children who are old enough to handle tools with a moderate degree of deftness, will take great delight in constructing and furnishing a "really, truly house," in which they can play. Only a few materials are required for this purpose, and the attic is the best place for the work. Nothing is better for the house than two or more large dry-goods boxes, which should be so high that the children can stand in them. Set the boxes side by side, like a succession of rooms, in an unoccupied corner of the attic; remove the entire front of each and cut one or two little windows at the side and back. Doors may then be cut between the rooms. Give the children scissors, hammer and tacks, small pieces of carpet, old curtains and other draperies,—anything in fact, which can be transformed by them into house furnishings or decorations. The boys, with their saws and other carpentering tools, will be interested in this work, though the paper dolls and the housebook may fail to attract them. It may be necessary to

work with the children to start them in this, as in all other occupations, until they catch the idea, when their interest and ingenuity will do the rest.

If the large boxes cannot be obtained, procure smaller ones of wood or pasteboard and have the work carried out on a smaller scale for a doll's house. This may be fitted up with pasteboard or paper furniture, and will usually be preferred to the house-book. Less permanent structures may be made of overturned chairs covered with shawls.

All the amusements based upon the kindergarten occupations, to which reference has been made in Volume VII, are especially suitable for the rainy day, except, perhaps, a few which, owing to the poor light, would be a strain on the eyes.

The delights of the sand pile may be transferred to the house by placing the sand upon a low table or bench, around the top of which a strip of wood about two inches in height is closely fastened to keep the sand from being scattered on the floor. If this receptacle is lined with tin, and a few little tin dishes of various shapes are provided, the sand may be moistened, and molded into the most attractive cakes and pies, or it may be spread out smoothly with a flat stick, and interesting impressions of objects of all sorts may be made on its surface. Fences and forts may be constructed, mountains piled up, and tunnels and caves hollowed out, all of which will make the children forget for the time that they ever cared to play out of doors. A dustpan and brush should be hung near the table, and the little ones requested to use them when any of the sand is spilled upon the floor.



When the sand table has lost its charm, suggest the making of soap bubbles. Dress the children in gingham aprons, or other suitable garments, and give to each a clay pipe or a glass tube. Let the operations be conducted in the bath-room, or in some place where a little splashing about of the soapsuds will do no damage. In a washbowl or large basin, make a quantity of thick, foamy suds. The coarser the soap, the brighter and stronger will be the bubbles, and they will be improved by the addition to the water of a little glycerin. Remember that the instant one of the fairy spheres touches a hard, smooth surface it will vanish, but that it will bounce merrily on a carpet or a woolen cloth.

Besides driving the bubbles around by blowing them gently, after detaching them from the pipe, and trying to see who can blow the

largest ones, or who can keep the greatest number in the air at once, the children may toss them in a blanket or a woolen cloth, which should be held out straight by the corners. Pipes having one tube inside another, or made with two bowls, may be bought, and with these double bubbles may be blown, one inside the other.

There is nothing more pleasing to children on a rainy day than playing in the attic, especially if they be allowed to rummage to their hearts' content among the dusty relics of past usefulness. If you have a quantity of old clothing and faded finery that the children cannot injure, let them "dress up" as their fancy dictates, and while thus occupied, a whole afternoon will slip away most happily. This is the time for enacting familiar stories and for "making up" all sorts of imaginative plays. Little folks delight in playing that they are grown up, and often mimic the ways of their elders in an uncomfortably realistic manner.

If the attic be too cold for quiet plays, open its windows, put hats and coats on the children and let them run and romp for a while. The fresh air and the exercise will afford a desirable form of relief for pent-up energies.

The making of paper dolls has been mentioned briefly, but no suggestions have yet been given how to make them. The figures of the dolls should be drawn upon cardboard and carefully cut out with knife or scissors; the faces may be painted, but as home-made faces are likely to be anything but pretty, it is more satisfactory to buy colored heads to paste upon the bodies. Tissue paper of several colors, gold and silver paper, a few sheets of ordinary writing paper, or medium-weight wrapping paper, scissors and paste are the materials required for a paper dolls' dressmaking establishment.

Cut out of the writing or wrapping paper a foundation dress of the proper size for the doll, leaving on top of each shoulder a narrow strip of paper an inch long, which is to be folded down over the shoulder of the doll to hold the dress in place. Leave two similar strips at the waist. Upon this foundation the tissue paper may be pasted plain, gathered or pleated, and trimmed with the gold and silver paper, in any design that pleases the eye of the dressmaker. The skirt should be pasted only at the waist line, and should hang free from below it; the waist should be fastened only at the neck, shoulders and waist line. Hats and cloaks of all styles may be made in a similar manner.

Another way of making the dolls and their dresses is to cut them out of fashion sheets. The colored fashion plates, of which there are so many nowadays, will furnish a family of dolls with the most magnifi-

cent wardrobes. Select from these plates the desired number of pretty heads, which should be without hats. Those for the men may be obtained from a tailor's plate of men's fashions. Cut out each head carefully, and separate it from the body close to the shoulders. On the back of the head paste a narrow strip of stiff paper or thin cardboard so that it will extend about an inch below the neck. On the front of this strip, where it appears below the head, press a bit of beeswax.

Now to each head may be added any number of changes of costume, by simply cutting out the dresses desired (leaving off the heads) and fastening them to the chosen heads by means of the wax on the strips mentioned above. Cut out several hats, and on the back of each put a very small piece of wax with which to secure it upon the head.

Another absorbing rainy-day entertainment may be carried out as follows: Cut from tissue paper a number of animals — cats, dogs, horses, pigs, and even elephants and camels. Make also a few little figures of dancers in short skirts. Remove the table cloth; lay two little piles of books on the table, and place a large piece of window glass upon them, shutting the ends in the books on either side, at a height of about four inches from the table; then put the figures beneath the glass, and rub the top of it vigorously for about two minutes, when the performance will begin. How the animals and dancers will leap to touch the glass, and what a constant jumping and whirling they will keep up for several minutes at a time, performing antics that will delight the children beyond measure! When they stop moving, repeat the rubbing process and the figures will again dance, and stand on their heads in most hilarious fashion. The success of this amusement depends somewhat on the electric force of the person rubbing. Anyone who habitually has cold hands seldom obtains good results.

Nearly all children like to write and receive letters, even if they are only "make-believe" ones. Fasten up in the nursery a box with a slit in the top for the posting of letters. Interest the children in writing little letters to each other and to the grown members of the household, and let the latter remember to now and then drop letters into the box for the children. A child may pretend that he is Robinson Crusoe or some other character who is familiar to him through his stories, and may write a letter such as he thinks that personage would write; or he may describe some journey or experience, either real or imaginary. Let the children write and post letters whenever they wish, until a goodly number have accumulated. Then, on some rainy-day, let one of the children act as postman, open the box and

deliver the mail, after which the box may be closed, and secured in the same place as before.

Longfellow says:—

"Into each life some rain must fall,
Some days must be dark and dreary,"

but if we can only keep a "heart of good cheer" within, and try to brighten things for others, we may make the rainiest days our happiest days.

HINTS TO MOTHERS ON THE AMUSEMENT OF CHILDREN

CHILDREN must and will be active. Their minds and hands must be occupied, and materials and opportunities of the right sort must be provided to keep them busy, or they will find and make use of those that are harmful. How often a child, tired of his toys, and at the end of his own resources for amusement, goes to his mother with a plaintive, "What shall I do?" only to be answered with the indefinite, "Oh, run away and play!"

A child loves play, and it is as essential to his welfare as are eating and sleeping; but he must be taught how to play. He can usually amuse himself with his toys for a part of the day, and can be amused by his mother or nurse for a time; but these resources can seldom be extended to cover the entire day, and there are many hours during which the little one is absolutely at a loss how to occupy himself. He needs a stimulus to his imagination, that he may devise new plans, and discover fresh fields for the exercise of his restless energies. The mother must be ready to supply this stimulus.

She keeps larder, closets, and medicine chests well stored to meet her child's physical needs, and it is just as necessary that she should have ready the mental food by means of which his mind may be kept stocked with suggestions and resources.

Every mother should realize the value of play with her children. Through it she becomes familiar with their character and their mental needs; and she will find that it strengthens between herself and them the bond of love, confidence, and sympathy. Yet the children must not learn to depend upon the mother for amusement, both for her sake and their own, for they need free play to develop their imagination and inventive faculties.

Most children, however, and especially very young children, need first to be taught how to play, and what plays and games are best.

Some plays are better than others, and as the mother gives her attention to the matter of her child's food and to the question of his bathing, so she should consider what games will benefit him most. Many children's games are meaningless, and sometimes harmful. Such games as "Policeman and Drunken Man," which suggest to a child the idea of wrong-doing and unhappiness, are pernicious and should be discouraged. To do this, better games must be substituted. Many children are ingenious enough to invent amusements for themselves, but the majority of really interesting and good games are suggested by older persons and are handed down from one generation to another. Often, only a suggestion is necessary to start the child's imagination working along lines that will afford occupation for his fingers, and keep him busy and contented for hours together.

The first requisite for a child's happiness is sufficient space for his play. If possible, let it be a space that he can call his own, where he can build houses and railroad tracks to his heart's content, and without fear of having them ruthlessly destroyed because "they litter up the room." If it is not possible to set apart a play-room for the children's use, and if the attic is not available for this purpose, screen off a part of a room for them; even though small, it is better than nothing. But let them be taught that they must keep their play space in order; let there be a place for all the playthings, and impress it upon the children that they must put their toys away when they are not in use.

The second necessity for the child's happiness and contentment is the companionship of other children. It is a mistake to keep him away from other children, through fear that he may come in contact with those whose influence would be harmful. The mother's companionship, though necessary, is not enough; and with a foundation of sound home-training, there is not so much danger from chance companionship as is commonly supposed. A healthy body resists infection; so a mind that is nurtured by careful training and healthful influences at home is the best safeguard against evil.

Boys and girls will, as a rule, choose different games, but it is well for boys to enjoy dolls, and for girls to "play horse" and spin tops, so that each may learn to respect the other's games.

Children are fond of stories, and even before they know the meaning of the words, rhyme appeals to them. They should not be

deprived of the nursery jingles, though these are decried by some crusty critics as meaningless and silly. Some stories are more enjoyable when told; others are better read, and children should early be taught to listen to reading.

For the entertainment of younger ones, learn, if possible, the kindergarten stories and songs, and adopt the kindergarten method of working out or illustrating them with the material at hand. The stories, after having been told, are retold by the children, and then "worked out"; that is, they picture the story, or parts of it, on the blackboard or on paper; they play it with their blocks; they model in clay the objects suggested by it; or cut them out from paper. In this way, the stories can be made to fill not only the time in which they are read, but many other hours as well; for often the merest suggestion will set a child to work, and sympathy and appreciation of his efforts will keep him interested and busy. With some children it is necessary to participate actively in the play; in this case, care should be taken to play *with* them and not *for* them.

In selecting stories for children, choose those that are really good literature. It is a mistake to suppose that the taste for the best class of reading is something to be acquired in later life. If a child's mind is fed upon trashy stories, an influence is produced that will have to be overcome when the attempt is made later to cultivate a taste for literature.

Songs also may be dramatized or worked out. If possible, learn the songs that the children sing at school or in the kindergarten, and have music for them in the home. Among the best books of songs for children are the collections of Eleanor Smith; those of Mildred and Patty Hill; Tomlin's "Child Garden of Song"; the Reinike Collection, and the St. Nicholas songs.

The great "out-of-doors" is full of possibilities for the amusement of children, if only they are helped to find them. Outdoor play should be encouraged as much as possible, not only because it is essential to the child's physical well-being, but also because it inspires him with a love of nature, teaches the habit of observation, and quickens all of his faculties. He will not acquire these things unaided, however. His interest in the objects and phenomena of nature must be encouraged and his many questions should be patiently answered; his efforts to investigate should meet with sympathy and encouragement, and he must have opportunity for further observation.

Whenever possible, let the children have an excursion to the woods or a jaunt into the country. A nutting party in the fall will not only be in itself a delight, but its fruits may afford pleasure and

occupation long afterward. Nuts are interesting playthings. Explain how the squirrels gather and store them away for winter use, and only a suggestion will set the children to playing "squirrel." This is one of the kindergarten plays—one of the children hiding the nuts, and the rest hunting for them.

Ripe milkweed pods are also a source of pleasure to the children. The pods may be gathered in September or October, and allowed to dry in the house. Explain why the seeds are winged, and how the wind plants them; and let the children have some pods to play with out of doors on windy days.

The collection of seeds and seed pods interests children when there is any reason for gathering them. Little folk, like "grown-ups," do not enjoy doing things unless there is some object in view, and they will always be found more ready to follow out a suggestion of something to do if, at the same time, they are made to feel that there is some apparent reason for their doing it. In making collections, the interest of older persons is often a sufficient stimulus, but a definite object, such as gathering seeds for next year's garden, appeals more strongly to the child. If he can examine the seeds with a microscope, he will be greatly interested in seeing the leaves that are already formed in many of them.

Autumn leaves can be gathered for decorative purposes. They can be traced, painted, or drawn; they can be pressed or waxed, and kept all winter to adorn the children's room or the table. The thickly-fallen leaves are delightful to play in, and the children will gladly rake them up if they can watch the operation of burning them.

Acorn cups make tiny dishes, and the double acorns may be strung by running a cord through them. The bright autumn berries, haws, thorn-apples and cranberries are especially suitable for stringing; and in season, clover and dandelion heads can be used in this way. Corn husk or hollyhock dolls, dandelion curls and larkspur wreaths are other delightful possibilities; while daisy or clover chains, made by tying the end of one stem around the head of another, possess a perennial interest.

Fruit seeds may be planted and the growth of the sprouts will be watched with interest, even though they do not reach an advanced stage of cultivation. The names of trees, their blossoms and their seeds, may be taught in an entertaining way, and the children will take pleasure afterward in identifying the different trees. Explain to them how the caterpillar spins the cocoon and emerges from it later as a butterfly; if possible, collect some cocoons, so that the children may watch the transformation.

If an aquarium, or fish globe, can be obtained, it will prove a never-failing source of interest to children who are old enough to collect

frogs' eggs, tadpoles, minnows, and crawfish; and to younger ones, if some grown person will accompany them upon their collecting expeditions. Tadpoles thrive best in a tub containing water from their native pond; it is fascinating to watch their change into frogs. A store of dried catnip-leaves, gathered in the fall, will be a source of comfort to pussy during the winter; as a useful occupation for a leisure afternoon, the children might gather a quantity of the pungent leaves to present in small packages to such of their friends as have feline pets. Bird owners also will appreciate contributions of chickweed and plantain seed, and the children will be glad to gather them if they feel that they are really wanted.

An outdoor garden should be a part of every child's summer experience; but he should not be asked to take entire care of a garden unaided. He must be helped by the suggestions, interest, and advice of older persons; and, as a further incentive to industry, should be allowed to give his flowers to friends and to hospitals. In this way there will be cultivated within him the instincts of love and thoughtfulness for others.

At the seashore, or wherever plenty of sand is available, an absorbing occupation is that of making mountains and valleys, rivers and lakes, which may afford a basis for elementary lessons in geography. A sand pile in a city back yard will serve the same purpose, and keep a child playing contentedly for hours. The laying out of miniature parks, with dishes of water sunk into the ground for lakes, pebble-bordered driveways, and moss-covered hills, contains, for an inventive child, infinite possibilities for amusement.

There is nothing more delightful to children than paddling in water, and nothing which, with ordinary precautions against taking cold, is less harmful. Dress the little ones suitably and let them frolic in a warm summer shower; or, on hot days, give them a tub of water in the back yard, or the garden hose to play with, and they will be happy.

Most children enjoy the keeping of pets. From the first, they should be taught gentleness to their pets and to all animals; cruelty in any form, whether intentional or thoughtless, should not be allowed. Do not give pets to children before the latter are old enough to know how to treat them; do not give a helpless kitten or puppy to a child who is not old enough to understand that he must handle it gently. Let a child of this age have a bird, or a fish, which it can watch, but

cannot touch. He should be taught how to take care of his pets, and should be held responsible for attending to them daily. Let him understand that as soon as he begins to neglect it, his pet will be taken away. Many parents object to giving animals to their children, on the ground that they tire of them so quickly. This is only child-nature, and a trait which older folks do not always outgrow.

Mothers will find a suggestion in regard to the plays and toys of their babies, in the fact that the larger motor activities are developed first — that is, the muscles of the arm develop before the smaller finger muscles, with which work requiring delicate handling or deft use of the fingers is accomplished. In evidence of this fact, it will be noticed that babies often prefer a clothes-basket, or some large object that they can carry around in their arms, to the small toys that must be held in their fingers. They need to exercise the larger muscles, so it is well to let them have the large things to play with when they want them.

There is one source of amusement from which children are too often excluded because it is "too much trouble." The baby, as soon as he can toddle after his mother, wants to have a hand in whatever she is doing, — wants to "help" her in her work. His efforts are decidedly more of a hindrance than a help, but if she will give him, for instance, a dusting cloth or a little broom, and will let him try to imitate her actions in the use of these articles, it will be a delight to the child, and at the same time will afford an opportunity to lead him to do, and to enjoy doing, many kinds of useful work.

Again, let the children have real tools, and show them how they are used. They will soon learn to handle them with a skill that will surprise you. In fact, it takes but little time and thought to lead children into lines of amusement that will keep them busy and happy, and will be beneficial as well; and once started on such lines, it needs only a suggestion from time to time, and occasionally a little active participation in the play or work, to sustain interest and to stimulate the childish imagination to vary, and to enlarge upon, the amusements he knows, and to originate new ones.

OBSERVATION

The instinct of investigation is native to children. Indeed, as we all know, sometimes to our cost, it occasionally amounts to a passion.

Putting in an appearance as it often does, at the most inconvenient times and seasons, it is still an instinct of the greatest educational value. In obedience to its promptings the child searches deeper and deeper

into the nature of the things about him, and thus possesses himself of a wider and wider range of knowledge obtained at first hand.

Every such child is an original investigator, and when one considers the rank which such a faculty occupies in the world of science — when one remembers that genuine investigators who think for themselves and whose observations are accurate and conclusions trustworthy, are most unusual and most valuable members of the human race — one cannot help wondering what has happened to the thousands upon thousands of children who started out with a strong native bent toward just such work. Somehow or other, in the course of their education, this ability has become a disability, and in place of the crowds of keen-eyed and sharp-eyed children, eagerly interested in every detail of the world in which they live, we have a crowd of half-informed, inaccurate, and indifferent adults.

The cause of such a deplorable state of affairs is not far to seek; the investigating faculty has atrophied from disease and the related mental activities have retrograded with it. It is obvious, then, that if we would have our children grow to a youthful maturity, their interests still keen and their senses capable, indeed, of finer discrimination than in childhood, but otherwise unchanged, we must utilize this instinct. We must make room for it in the program of our daily lives and see to it that momentary inconvenience does not blind us to its true value.

Investigation is only a more thorough form of observation, and to observe is not only to see an object with the eye, but to fix the mind upon it, to examine it in all aspects, and to search out its qualities. We must subject it to the action of several faculties. We must try it by all the available senses, and memory and reason must act upon impressions which they gather. Judgment must compare these impressions with other objects and must select the important points. Observation is thus seen to be not so simple a faculty as at first appears, but to call for the exercise of some of the highest mental activities in order to complete itself.

For, as James observes, "Infants must go through a long education of the eye and ear before they can perceive the realities which adults perceive." He goes on to explain that we never see an object as it is in itself. Whether "the thing in itself" is possible as a conception or not, it certainly is not possible as a perception. Each thing at which we look is immediately compared with some other thing which it either resembles or contrasts. Presently it happens that when we see this thing, we also see at the same time a sort of reflected image of these other things with which, at the first seeing, we associated it. In order to prove this assertion, James advises his readers to look steadfastly at a word upon the

printed page, to endeavor to see it, as it were, out of its relationships. It will presently appear devoid of meaning. It will appear to us who know it, as strange as it might to a North American Indian. A familiar instance of this sudden reduction of a word usually clothed upon with familiar associations, to its original nakedness, is the almost malicious changes which it will undergo when we are doubtful about its spelling and try it over and over again in several different forms, none of which will "look right."

I remember a similar experience when, a child of some ten years, I discovered my eyebrows for the first time. I gazed and gazed at them in the mirror until they seemed to cover the greater part of my face — grotesque hirsute appendages to an otherwise ordinary enough childish countenance. This odd effect was wrought simply by perceiving this feature out of its usual relationship — exaggerating it by bestowing an uncommon amount of attention upon it. In order to see even such every-day things truly, there must be a nice balance of attention coupled with settled appreciation of time and space qualities. Every perception then, as James says, is an acquired perception.

In the instance just given it was observable that the burlesque effect was given by means of a concentrated attention. No true observation takes place without some degree of attention, though with young children there is much of what is called passive attention. Education will ripen this in most cases into voluntary active attention, though it is to be hoped not entirely at the expense of the power of passive receptivity. For this passive attention is largely an affair of the physiological structure of the brain and is of immense importance, both as saving the wear and tear of the voluntary faculties and as hoarding up, as it were, mechanically, a vast store of impressions to be used when needed.

Passive attention depends, as we have seen, upon two factors — the impressionability of the brain substance and the brilliancy or attractiveness of the object observed. Voluntary attention depends upon these things also, but more upon changes in the object. Complete absorption in an immovable, unchangeable object is impossible. When the Hindoo devotee fixes his attention upon some single object selected for contemplation, he may call the effort which he makes, concentration, but the true nature of the process is revealed in the fact that he speedily passes into a trance or hypnotic sleep. Despite his utmost effort, it has been impossible for him to keep his mind fixed upon the object that he supposed himself to be contemplating. However, there is one way in which an immovable and unchangeable object may engage the attention for a considerable length of time, namely, by fixing the mind upon its relationships; for a thing seen under different aspects is, as far as the mind is concerned, a moving and changing thing.

Interest in observation, we find, may be stimulated by perceiving relationships, and thus the pleasures of observation need not depend upon the rarity, or beauty, or novelty, of the thing observed. Children will naturally show a tendeney to be interested only through these qualities, but if this tendeney be unchecked they may grow into the restless, pleasure-seeking men and women who cannot live eontentedly without new sensations. What we want to give our ehildren is the power of seeing in the eommonplace things about them things that are not at all commonplace.

A great deal of speeial training must be given to produce the habit of thus looking with enjoyment at familiar and insignifieant things, and to give this training the mother herself must have a quick eye to observe relationships, a playful imagination, and some degree of versatility. However, even if she laeks these qualities but gives her children opportunity and encourages their efforts by her intelligent sympathy, she will soon find that the ehildren themselves are teaching her, and that by living with them she is regaining her own youth. Her own eyes are beginning to see as their eyes see, and her mind with theirs wakes every day to a fresh and joyful activity.

In order to see things in this thorough fashion, they must be subjected, as I have said, to all manner of sense-tests. Not only must the sight be edueated, but the hearing, the touch, the smell, even the taste. Not only does the objeet itself then become known in a new way, but each sense brought to bear upon an objeet is educated by the aetivity. Each test reveals new relationships, and each fresh faet pereeived thus leads to hundreds of other related facts and paves the way for new observations.

The ideas that books supply have already gone through most of these processes in the minds of the writers and eome to us in a eompleted form. Too great devotion to them, to the exclusion of observation, is likely to lead us to shirk the transition aetivities upon whieh, nevertheless, depends eoherent thinking. The habit of reading also consumes much time whieh we should otherwise put upon the study of external objects, and it supplies us with so many interesting subjects of thought outside of our personal experienee that we are less interested in those whieh lie within it. But although books sometimes serve in this fashion to dull the power of observation, they also serve to inerease it by pointing out the worth of the faets observed, and showing their relation to hitherto unthought-of facts. They show us what to see, and what to think about what we see. Inspired by the ability and subtlety with which a master-mind handles the facts, which had before seemed to us commonplaee, our own imagination is roused to emulation, and by the powers of assoeiation we see

commonplaces clothed in the fair colors of genius. Used to supplant observation, then, books are harmful, but used to supplement and stimulate it, they give us a magic glass in which to see a world otherwise beyond the reach of our vision.

"Not recognizing the truth," says Herbert Spencer, "that the function of books is supplementary,—that they form an indirect means to knowledge when direct means fail,—a means of seeing through other men what you cannot see for yourself; they [teachers and parents] are eager to give second-hand facts in place of first-hand facts. Not perceiving the enormous value of that spontaneous education which goes on in early years,—not perceiving that a child's restless observation, instead of being ignored or checked, should be diligently administered to and made as accurate and complete as possible, they insist on occupying its eyes and thoughts with things that are, for the time being, incomprehensible and repugnant. Possessed by a superstition which worships the symbols of knowledge instead of the knowledge itself, they do not see that only when his acquaintance with the objects and processes of the household, the streets, and the fields, is becoming tolerably exhaustive,—only then should a child be introduced to the new sources of information which books supply: and this, not only because immediate cognition is of far greater value than mediate cognition; but also, because the words contained in books can be rightly interpreted into ideas, only in proportion to the antecedent experience of things."

The fact thus clearly enunciated, that words have no meaning except as they are based upon experience, is illustrated to us all every day of our lives. When, for example, we watch little children learning to speak, we cannot fail to recognize that they acquire each word after they have acquired some experience of the object or action to which it refers; so, when we try to talk to a foreigner, we find his words unintelligible except as far as our own experience has filled his strange words with familiar meaning. Children who, following their instinct for imitation, try to use words without first filling them with the contents of experience, make the most amusing blunders; and this is especially true of children who have been taught to recite — that is, to repeat the words of another without sufficient experience to comprehend them. A little boy who was nagged for table manners quoted Scripture in a fashion that very well illustrated this point. His sister, holding her knife in the wrong hand, nevertheless corrected him for having his elbows on the table. "You better not talk," he said, "you better get the bean out of your own eye before you try to take the moth out of mine."

A more extreme instance was that of the little girl, who was required to memorize a favorite psalm and whose version of it ran in this wise: —

"The Lord is my Shepherd,
I don't want nothing.
He makes me to lie down with green plasters on,
And an oily head full of mercy."

The reason these absurd mistakes were made, is because the imagery employed in both these passages of Scripture was outside of the child's experience; he could not therefore understand it, but supplied its place with imagery that was within his experience.

We used to have a story at school which, I confess, I fail to remember in all its details (having observed only the principle involved in it), which ran something in this wise: A prominent scientist being in need of an assistant, and finding it very difficult to get one who would answer his purpose, decided to choose a bright boy from among the pupils of a neighboring high school and train him for the position. He therefore went into a room of the school and asked the pupils to look out of the window and then to write out for him what they saw. He chose the boy whose observation was the fullest and the most accurate.

Perhaps from a less worthy motive — very possibly, from an advertising motive — a merchant of Toledo, Ohio, once offered a prize for quick and accurate observation. There was a Polish Jew in the city whose name was long and unpronounceable — the boys for short called him "Grubstruck Skinitski." The prize was to be given to the person who, after walking once past this man's shop could spell correctly the name upon the sign. It is interesting to note that it was a child who took the prize.

This instance suggests an admirable procedure for the developing of the power of observation. Take the children past the window of a store and let them vie with one another in seeing how many things they can notice and remember.

Reports in full of walks and vacation expeditions are also excellent for this purpose, but they are especially valuable if the child's motive in making the report be not merely to see how full and accurate he can make it from delight in his own power, but as much in order to give some one else a pleasure. Suggest to him that papa has had to stay at the office hard at work while the child was making his pleasant little excursion, and that a vivid report of the trip will be for papa the next best thing to going himself. Or perhaps there is a little city friend who could not get out of town this summer, but who would like to know how the country looked to the more fortunate child. If the written description is supplemented by drawings, pressed flowers and ferns, bits of moss, and other specimens gathered on the walk, it will be at once more interesting and more helpful to its author. Many schools are now requiring some such written account of the summer vacation,

and are thus utilizing the interest generated by vacation pursuits to start off the heavy fall work with something of a swing and go.

Less formal than such written exercises are many games which the children delight in playing and which are distinctly educational in their effect. For example, there is that in which one of the players thinks of an object which the others are to guess by the help of a certain number of questions, as: Is it animal, vegetable, or mineral? Does it live on land or water? Has it feathers, or fur, or scales? Has it legs? etc., each question being so expressed as to be answered by yes or no. In another, a certain number of articles are put upon the table and each player after a hasty glance strives to name more than the other.

This game can be so enlarged upon as to form the basis of a whole evening's entertainment. At such a "sense party" a variety of objects is spread upon a large table in a room other than that in which the guests are assembled. They are allowed to go in and look for three minutes at these objects, which must be all piled together in confusion but with some single part of each object in view; they then go back into the other room and write on slips of paper provided for the purpose the names of as many objects as they can remember. Next, they are blindfolded, taken again into the adjoining room and allowed to feel of a fresh mass of bewildering things for another three minutes, after which they again go back and report. Their sense of hearing is tested by striking with wood and metal upon a variety of materials which give forth different sounds. Next, they are allowed to taste of various substances, sweet, bitter, sour, and salty, and in the same way to smell of different flowers and kitchen essences. The reports are then corrected and compared and a prize is awarded to the successful competitor.

In teaching observation in these or in other ways, we must be careful not to force interest — the characteristic choosing power of the individual. All objects cannot be of equal value to any two observing individuals; to force them to take an equal interest in objects not in themselves interesting is to force them out of the special power of their own natures — that power which will give to each his distinctive place in the world and his distinctive piece of work to do. Yet it need not be feared that in thus allowing the individual to choose that which he most cares to observe, he will be missing a wide range of truths which lie outside of his chosen field of investigation. For, by the law of relativity, any single object studied in all its implications will eventually lead out into the whole world. He may then begin to observe at any point he prefers, and if he observes exhaustively enough, he will finally discover that all facts are of value to him.

Not only are facts thus related to each other, but every power of the mind is related to every other power, and to all the activities of

human life. It is at once obvious that observation bears a very immediate relation, for example, to practical life. Of value to the schoolboy and girl in their task of mastering the world about them, it is also of value to the clerk. For the man who observes most closely the details of his employer's business, the faces and the peculiarities of his customers, is the clerk who, all other things being equal, will be first promoted. The dressmaker, also, who has the quickest eye to catch the indications of changing style and to see how effects are obtained, is the dressmaker who will distance less observing competitors. The shoemaker who notices most clearly the shape of his patron's foot, the places in which the old shoe is worn, and the habits of sitting and standing of his customer, is the shoemaker who gives the best satisfaction. As Spencer says, "Indeed, if we consider it, we shall find that exhaustive observation is an element in all great success. It is not to artists, naturalists, and men of science, only, that it is needful; it is not only that the skilful physician depends on it for the correctness of his diagnosis, and that to the good engineer it is so important that some years in the workshop are prescribed for him; but we may see that the philosopher is also fundamentally one who *observes* relationships of things which others had overlooked, and that the poet, too, is one who *sees* the fine facts in nature which all recognize when pointed out, but did not before remark. Nothing requires more to be insisted on than that vivid and complete impressions are all essential. No sound fabric of wisdom can be woven out of raw material."

All true art, as well as good artisanship, we find, then, is dependent upon observation. But to produce art, the imagination and the spiritual faculties must be active at the same time with the observing faculties, so that the child habitually sees with both his outer and his inner eyes. Mere physical accuracy and comprehensiveness of vision are not enough; there must also be a wide spiritual vision. Nor does any education fulfil its purpose which permits the child ever to see with the outer senses alone. If it is important to him to see the physical relationship of things, it is of transcendently greater importance that he should see the spiritual relationship.

The imaginative child, indeed, is prone to drape a wondrous fabric, woven of such relationships, about the smallest observed fact, and it is therefore of especial importance to him that he should have a number of such facts upon which to exercise this higher faculty. For the imagination, though it may sometimes usurp the powers of observation, is dependent upon it for its supplies of new material, and the healthiest and

most effective imagination is constantly nourished by a never-resting observation of the facts of the external world. It is this union of the powers of outward and of inward vision, as we have just seen, that makes great poets and great artists. That poem or that picture is only half great which describes or copies nature and leaves out spiritual analogies, just as either is incomplete and indefinite which does not unite spiritual truths with natural correspondences.

We have here stumbled upon the relation of expression to observation. Expression transforms passive to active attention and makes us conscious of facts that we have before only subconsciously observed. Hence, it serves to make the results of observation more consciously and permanently ours.

As might be surmised, the relation which memory bears to observation is not less close. According to the intensity of the original observation will be the vividness of the mental image and the clearness of its recollection. But the memory is fortunately not so much dependent upon the original vividness of the impression made by an observed fact as upon its relations to other observed facts. If this were not so, we should remember only those things — comparatively few in number — which unusually arouse our emotions or excite our wonder. Being rather dependent upon related facts, memory is able to recall when needed the hundred little commonplaces of existence which are as a rule more necessary to our work and happiness, than the few great occurrences which startle us out of our habitual routine. To quote James again: "*The more other facts a fact is associated with in the mind, the better possession of it our memory retains.* Each of its associates becomes a hook to which it hangs, a means to fish it up by a network of attachments by which it is woven into the entire tissue of our thought. The 'secret of a good memory' is thus the secret of forming diverse and multiple associations with every fact we care to retain. But this forming of associations with a fact, what is it but *thinking about* the fact as much as possible? Briefly, then, of two men with the same outward experiences and the same amount of mere native tenacity, *the one who* THINKS *over his experiences most*, and weaves them into systematic relations with each other, *will be the one with the best memory.*" Observation, then, like the other faculties of the mind will not bear forcing. There must be time for thinking about the objects observed, for linking them mentally with other observed objects, and for drawing sound conclusions.

This brings us at once to the relation of observation and reason. All the facts upon which reason bases its conclusions must be furnished by observation, and it follows that their value depends upon the reliability of that faculty. We are all of us familiar with the annoyance that arises from the habit certain minds have of reasoning from

insufficient data. This is, of course, characteristic of immature and — as heretofore supposed — of feminine minds. Possessed of fair powers of drawing conclusions, but without a sufficient body of accurately noted truths from which to draw them, from the slightest vantage-ground they leap to conclusions with a wonderful celerity quite out of proportion to the value of the result. Indeed, reason which is not based on truth, and truth which does not test itself by a constant measuring of itself against the great outer world as well as against the inner world, has no validity.

Observation, it now appears, has a relation to moral character. Accuracy and truthfulness are so closely allied — although of course, the latter is the greater quality — that one can scarcely be said to exist without the other. Anything may seem true to the man who lets himself go in his thinking and never tests his conclusion by the conclusions reached in the world about him by the Master-thinker of the Universe. And similarly, no one can accurately report the simplest fact who does not see it in the sum of its relationships, including its relation to the spiritual realities.

Perceiving facts clearly, he must also perceive the immutability of law, and hence the inevitable punishment which must follow any transgression of law. At the same time that he thereby perceives the chaos which would follow if laws could be broken with impunity, he also perceives the beauty of order, which results from their harmonious interaction. As Dante has it,—

"All things collectively have an order among themselves, and this is form, which makes the universe resemble God."

Following such implications, we see that true observation is the humble handmaid of religion. From Nature to Nature's God is not a step; it is a growth. It is only when the tremendous knowledge of Nature opened to the world of recent years by science comes upon the human mind, after its religious ideas are already shaped to conform to a narrower mold, that it tends to upset religious convictions. The child, unhampered in his development, sees God everywhere in His works,— in that ever-living Word which reveals Him, fresh written every day,— His visible creation. If, from the beginning, the child has looked forth with eyes retaining their primal innocence, seeing at once the physical and the spiritual worlds, each new fact will be a new truth, all truths will be loved, and God, the Supreme Truth, will be both seen and loved.

REASON

Reason may be said to show itself the first time a child looks for the cause of a noise. The date of this activity of course varies with different children, but usually it may be observed toward the end of the first half year. In this form, however, it is so closely allied with the reasoning of animals as scarcely to be distinguished from it. Horses, for example, turn their ears backward in order to catch more clearly the commands of their drivers. A more pronounced instance was that of the trained elephant, Gypsy. Her keeper, to show her intelligence, used to go outside of the circus tent in which she stood feeding and call to her from behind the canvas walls. At the sound of his voice, she would roll her small eyes around seeking for him, would stand a moment as if in thought, and then swing her great bulk slowly toward the quarter whence the sound had proceeded and lift the canvas of the tent to let her master in.

Such primitive reasoning takes place by means of contiguity; that is, certain effects have, within experience, followed certain movements, and may therefore be expected to follow them again. It is scarcely more, indeed, than an habitual association of two experiences closely related to each other in the past. Drummond, in his "Natural Law in the Spiritual World," relates that he was, previous to the writing of that book, engaged in carrying on a series of lectures on Natural Law, at the same time that he was trying to write a treatise on man's spiritual nature. He soon found that the dividing wall between the two sets of thoughts was becoming thinner and thinner, until finally it broke down altogether and he found himself discovering natural laws in the spiritual world. On a much lower and simpler scale, this is what happens in the simple inference which we are now considering. Two ideas occurring almost simultaneously tend to coalesce and form a third idea, almost without the interposition of any voluntary mental activity. Instinct is such reasoning repeated until it has become a part of the organism and acts mechanically.

Simple inference, then, is the mere recognition of a habitual succession of events. "*Post hoc, ergo propter hoc*" is the formula for this kind of reasoning. True human reasoning appears when from a similar movement, occurring under different circumstances, the same effect is nevertheless expected. In the first case, similar movements occurring under similar circumstances are expected to produce a customary effect; in the second, the essential characteristic of the movement is recognized, even under changed conditions, and a like result is therefore expected.

In this form it may, of course, lead to false conclusions, but the mental activity is, nevertheless, true reasoning.

My little son, aged eleven, gave a very good example of this true reasoning from a false premise. He was attending an amateur circus and during the performance leaned against a red tent pole. It had been raining, the paint had been improperly prepared, and the consequence was that he came home with a blouse all streaked with red. However, he cheerfully assured me that it would wash out. "Because," said he, "water made it come out of the tent pole into my blouse, and so, of course, water will make it come out of my blouse." This was sound reasoning, and inadequate knowledge of the effect of paint upon different materials was alone responsible for the false conclusion.

Instinct, then, is an involuntary faculty. The movements made in response to its promptings are spontaneous, unthought of, and sometimes take place even contrary to the will of the individual. Of such sort is the blinking of the eyelids to protect the eyes from an apprehended blow. Even when we are perfectly well aware that the blow is only a pretense, made to test our power of self-control, we are still unable to resist the instinct which compels us to protect our eyes by closing them. Instinct, since the will enters into it not at all, we find to be unmoral.

Reasoning, on the contrary, is voluntary; it implies active attention and selection — both acts of the will. Attention has already been defined as the characteristic choosing power of the individual; when he pays attention to a sensation, it is because he voluntarily shuts out all other sensations for the time being from his consciousness and concentrates his mental activity upon the chosen sensation. Reasoning is, therefore, in so far as it depends upon the will, a moral faculty.

Inference is a step above instinct because it can be inhibited by act of the will — that is, while one may not be able to avoid drawing the inference, one can avoid acting upon it. It is more difficult to resist the promptings of instinct in the case of a human being than to resist acting upon an inference; animals of course, do not as a rule make an effort to resist. This is because instinct is a habitual inference, while the simple inference may have occurred only a comparatively few times. For example, it is entirely possible for a child to resist the call of the dinner bell, although the sound of it has been associated so frequently with the idea of dinner and of movement toward the dining-room that upon hearing it the inference that he ought to go to dinner involuntarily rises in his mind. Quite different, this, from the instinct that prompts him to run away from a terrifying event and take refuge with his mother.

The fact that animals are entirely capable of this kind of inference has led many people to claim for them an almost human degree of intelligence,

but, as we have seen, this inference is only a step higher than instinct. It operates almost as involuntarily, the will having nothing to do with causing it and being capable only of negating it. The difference between such simple inference and true reasoning consists in the fact that, during inference, the mind is passive,— cannot help the association,— and in reasoning an intellectual effort is made to choose from the observed fact one quality from which a useful inference may be drawn.

Such reasoning from observed properties — a reasoning which, it is evident, is founded upon analysis — is possible to exceptional animals, but even that does not prove them to be capable of true reasoning. To reach that height of intellectual performance they must be able to discriminate the identical attribute necessary for their purpose and to recognize it in another and dissimilar object. Mr. James gives an instance which admirably illustrates this distinction: —

"A friend of the writer gave as a proof of the almost human intelligence of his dog that he took him one day down to his boat on the shore, but found the boat full of dirt and water. He remembered that the sponge was up at the house, a third of a mile distant; but, disliking to go back himself, he made various gestures of wiping out the boat and so forth, saying to his terrier, 'Sponge, sponge; go fetch the sponge.' But he had little expectation of a result, since the dog had never received the slightest training with the boat or the sponge. Nevertheless, off he trotted to the house, and, to his owner's great surprise and admiration, brought the sponge in his jaws. Sagacious as this was, it required nothing but ordinary contiguous association of ideas. The terrier was only exceptional in the minuteness of his spontaneous observation. Most terriers would have taken no interest in the boat-cleaning operation, nor noticed what the sponge was for. This terrier, in having picked those details out of the crude mass of his boat experience distinctly enough to be reminded of them, was truly enough ahead of his peers on the line which leads to human reason. But his act was not yet an act of reasoning proper. It might fairly have been called so if, unable to find the sponge at the house, he had brought back a dipper or a mop instead. Such a substitution would have shown that, embedded in the very different appearances of these articles, he had been able to discriminate the identical partial attribute of capacity to take up water, and had reflected, 'For the present purpose they are identical.' This, which the dog did not do, any man but the very stupidest could not fail to do."

The peculiar value of the analysis which cuts things up, as it were, into their component elements, is very clearly set forth by the same writer. Since each thing has many properties and each property has a general likeness to that same property present in other objects, to perceive the property is to call up the image of many other objects in which that property may be found. The mind then has an idea of what may be expected to coexist with that property. It perceives similarity

in the midst of dissimilarity. Given these two factors, it may combine similars and arrive at a conclusion, or it may combine dissimilars and show the falsity of a conclusion.

The perception of similarity, like the inference from contiguity, may be falsely exercised and lead to false results. Such was the case of the little girl who, living in the city, was familiar indeed with parks and trees and birds, but not with country fields. Upon a visit to the country, she saw a haystack for the first time and excitedly called her aunt to come quickly and see the great big bird's nest. The action of her mind in this instance was, as far as its reasoning was concerned, a perfectly logical, well-ordered affair. The fault was in her observation. If she had looked closer at the haystack she would have perceived its dissimilarity to the bird's nest, and, on consideration of this dissimilarity, she would have seen why it could not have been a bird's nest and would have proved her own conclusion unsound.

After similars have been discovered, the mind takes constant pleasure in finding new similars; hence the joy that we all feel in a good metaphor or analogy; hence, too, the irritating tendency of children to argue that because we, who are in authority over them, do or do not do certain things, they also must do them, or not do them — "You don't go to bed at eight o'clock, and I don't see why I should. If I need the sleep you must need it too, for you are bigger and it takes more sleep to rest you." However, as Mr. James reminds us, "Such furnishing of parallel cases is the necessary first step toward abstracting the reason embedded in them all." Such reasoning, common to children and primitive people, is peculiarly maddening from the fact that we perceive at once the reasonableness of the mind's process and the untenableness of the conclusion. We are likely to consider it, as James says, "a species of logical depravity," but it is really correct reasoning, from incorrect or insufficient data.

This is the sort of mental activity, of course, which underlies all reasoning from analogy. Being as yet in possession of an inadequate experience, and full of the zeal of exercising a new and important mental faculty, children, as might be expected, draw all sorts of inferences from analogous circumstances, often with the most amusing results. For instance, Rowland and Gertrude, as a punishment, had been told to sit upon the floor on opposite sides of the room. Rowland presently called out, "Say, mamma! Gertrude has hitched out of her place!" (he himself meanwhile was lying on his stomach reaching out for a book). Gertrude promptly replied, "You have hitched, too!" whereupon Rowland crushed her with the rejoinder, "O, but I've got my foot on the base! You're all off your base!" Here he had used his powers of analysis and comparison, and had reached the conclusion that a certain act, permissible in a game of base-ball, was also permissible in his state of punishment.

We often find ourselves less able than this little fellow to justify our actions. This is absurdly true when we try to explain our likes and dislikes. Our thought has somehow or other found some reason for the feeling in a resemblance or contrast which our power of analysis is not keen enough to detect. The persons who depend upon first impressions have such half-developed powers of reasoning. They see a face that bears some sort of likeness — perhaps sufficiently subtle to defy analysis — to another person of whom they have been very fond, and they at once leap to the conclusion that the stranger is a person to be liked. Or, on the other hand, the likeness will be to some person who has been unfriendly, and at once the stranger is regarded with suspicion. Tones of voice, little tricks of speech, and other minute personal peculiarities are more likely to lead to these unwarranted conclusions than are more noticeable peculiarities; because in this latter case, the mind detects the insufficiency of the data and distrusts its own conclusions. The highest order of reasoning, then, depends not only upon the ability to find a similarity, but to abstract it consciously and thereafter to estimate correctly its importance.

This is a delicate operation — so delicate, that the wonder is, not that it is so rare, but rather that it exists at all. Intense interest or concentrated passion is necessary to make most of us think thus clearly and profoundly. In the exaltation of passion, we suddenly find a reason for the prejudices which in our normal state were unexplainable even to ourselves. Some one accuses us, perhaps, of an uncharitable attitude of mind toward Mrs. Blank. In our indignant refutation of the charge we find ourselves possessed at once of the reason why we never liked her. Brought thus clearly into view, the reasons may be obviously insufficient, and then, if we are reasonable creatures, we abandon the irrational prejudice.

In men of genius, this exaltation of thought is more frequent than in most human beings. They have either wider and more intense interests, or greater passions; often they have both. The fact that passion is so frequently a concomitant of genius — one is almost tempted to say, a necessary concomitant — accounts for the aberrations of great men. Goethe had such wide interests and sympathies, together with such warm passions, that he could hardly help being interested in the sins of passion. Human nature, at all times and under all conditions, was to him of absorbing interest, and especially so, when its characteristics were thrown into high relief under the glare of great excitement. At the same time that he was too great an inquirer not to desire to see his fellow-beings in the glow of an ardent passion, his sympathies were so keen, his own responsive passions so easily roused, that he could not draw near to a human soul on fire without being a little burned himself.

James thinks that "genius is identical with the possession of similar association to an extreme degree." But if a lay mind could venture to disagree with so eminent an authority, I might venture to suggest that this definition is incomplete. The recognition of similarity must be stimulated by either moral or intellectual passion before it reaches, even in minds most richly endowed, the splendid height which we call genius. In other words, the will — by which term, I mean the kind of tension produced by an emotion or desire — must be at work concentrating and focusing, and at the same time expending the mental activity. It must work within the mind like the ferment in grape-juice before the intoxicating wine of inspired thought can be produced.

In all this discussion, reason itself has not been defined, although its operation has been described. We all know in the large what is meant, and perhaps a definition is scarcely necessary. But in order to show the relation of reason to other mental faculties—in short, to the whole life of the individual—some sort of definition may be helpful.

In our study of observation, we found that all facts are related and that no observation was complete without recognition of this relationship. Reason may be defined as a perception of the lines of relationship which radiate from every observed fact, and the direction in which any given line may be continued. Such a recognition may be of two kinds: (*a*) The line of relationship may be perceived and followed to its result out of sheer interest in the process. The mind in which this form of reasoning prevails is, in its degree, a scientific or philosophic mind. (*b*) A certain result may be desired, and in that case, from among the various possible lines of relationship radiating from all facts, those which lead to the desired result are chosen, after a tentative examination of the others. The rejected lines of relationship seem to have almost no existence at all for such minds. Raised to their highest power, such reasoners become reformers, artists, and poets.

Having now established what was probably unquestioned in the first place, the worth of a sound human reason, let us see what we can do to develop this faculty in our children. Perhaps the first question we could ask ourselves is whether a high order of reasoning power is inheritable or not? But to this question, back of which lurks, for some of us a dread, and for others a hope, Mr. James gives an unqualifiedly negative reply: —

"Man owes," he says, "his whole preëminence as a reasoner, his whole human quality of intellect, we may say, to the facility with which a given mode of thought in him may suddenly be broken up into elements which recombine anew. Only at the price of inheriting no settled instinctive tendencies, is he able to settle every novel case by the fresh discovery, by his reasoning, of novel principles. . . . If, then, the law that habits

are inherited were found exemplified in him, he would, in so far forth, fall short of his human perfections." It is probable, however, that the organ for reasoning — the superior brain — can be inherited; but whether inherited from a parent who, like most of the geniuses of the world, has used up the tremendous forces of his brain and left little to be transmitted, or from a parent whose well-nourished organism and unwasted energies are in shape for successful transmission, we must let our own powers of reason decide for us.

But whatever the child has inherited or failed to inherit may be vastly improved by education, and the first of educational forces, we find here as elsewhere, is example. The mother must be reasonable herself — must restrict herself to issuing only reasonable commands, when commands are necessary — obviously reasonable, moreover, not only in such fashion that they appear right to her adult brain, but also in such fashion that they appear so to the less developed brain of the child. All her requirements must conform to this standard, and in so far as they fall short of it, she will inevitably find herself, not the inspirer of the child's reason, but rather its victim.

For it is inevitable that as the child's logic develops it will be exercised upon the world about him, and most especially upon the world of home. Of course, he will use his keen young faculties to judge of the people and events with which he is most familiar, just as a young rat will gnaw first the walls about the home nest. Such exercise is no more necessary to the proper development of the rat's sharp teeth than is criticism to the boy's analyzing faculties. When some of the dearest prejudices of the family are gnawed at it may cause pain, but after all it is worth while. We may well watch closely what is happening, because thus we may discover for the first time of what they are really made. Should the child succeed in convincing us that they are not true substance at all, let us hope we shall be strong enough, whatever their antiquity, to suffer them to be destroyed and cast aside.

The child's logic, which inevitably concerns itself in some such fashion with the affairs of home, can be best strengthened by finding on investigation that that home is, on the whole, a reasonable one. Regularity and temperance — in the sense of true moderation — have much to do with turning destructive tendencies into helpful criticism. If children are accustomed to see those whom they love subjecting themselves habitually to the guidance of reason, even to the acceptance of childish rebukes, they will the more easily subordinate their own natures to the rule of reason. On the other hand, an ill-regulated home-life will confuse their standards, and the illogical parent is obviously lacking in one of the qualities they admire. For all children have an instinctive admiration for logical people — and naturally, because they

have but a few years in which to master the myriad facts of life, and cannot afford to be misled by those who do not see them clearly. This probably accounts for the troublesome tendency of growing boys to scorn the counsel of mother and sister. The facts of the outdoor boy world do not seem to fit with the counsels of women who have been shut away from them. Unable, perhaps, to meet the demands of this lusty logic, we make the mistake of appealing to their affection for us and thus setting it in opposition to their reason. Feeling, thus divorced from reason, is a dangerous guide for a boy, and he knows it by instinct and turns from those who would force it upon him.

For reason is to him a joy, as it should be to all. Have we not seen the faces of children light up with a new thought, and have we not, too, seen them cloud over instantly at a suggestion which they could not reconcile with previous experience? Though we may not have considered it, to follow a thought step by step, through all its processes, holding fast by the clue, getting nearer and nearer the light with it and seeing it clearly at last, unconfused with other ideas and perfect in itself, is an unmixed joy. Like all other delights, such joy is an incentive to the constant practice of an ability, and is, therefore, a great developer. As Froebel says: —

"God neither ingrafts nor inoculates. He *develops* the most trivial and imperfect things in continuously ascending series and in accordance with eternal self-grounded and self-developing laws. And God-likeness is and ought to be man's highest aim in thought and deed, especially when he stands in the fatherly relation to his children, as God does to man."

Such a fatherly relation presupposes all sorts of little caressing pleasures. The play of the intellect — wit — is one of these. We all know the delight children take in a joke, and the laborious efforts which, in their desire to experience this delight, they will make to find the fun element in a joke beyond their power of comprehension. I remember once seeing, on a Sound steamer, a little girl in the convulsive throes of such an effort. Ignoring the wide skies about her, the rush of the water past the vessel's side, the dip of the sea-gulls — all things which would ordinarily have claimed her quick attention — she sat studying the "funny page" of a New York paper and laughing valiantly. She could not read a word, she did not know what the pictures meant, and they weren't very funny at best, but she tried bravely to rise to the occasion and to be cordially hilarious.

Had Richter, "Der Einzige," been there, he would have helped the little tot to extract what fun there was to be had; for he contends that: "The development of wit, which is scarcely ever thought of for

children is the least hurtful (of the faculties) because its efforts are easy and momentary; the most useful, because it compels the new machinery of ideas to quicker motion; because by the pleasure of discovery, it gives increased power of command over those ideas, and because in early years this quality, either in ourselves or in others, particularly delights by its brilliancy. Why are there so few inventors and so many learned men whose heads contain nothing but immovable furniture in which the ideas peculiar to each science lie separately, as in monk's cells, so that when their possessor writes about one science, he remembers nothing that he knows about the rest? Why? Solely because children are taught more of ideas than of command over those ideas, and because in school they are expected to have their thoughts as immovably fixed as their persons."

Richter had a little school of ten children over which he presided for three years, and among his novel procedures was a deliberate plan for teaching children to find the humorous resemblances among things. As we have already found that the reason is dependent upon the ability to detect similarities, we now find that wit, which largely consists in a playful juxtaposition of unexpected similarities or contrasts, is dependent upon the very perception on which reason depends. All other things being equal, then, we should expect the man of wit to be also a man of thought. Richter's pupil, for example, had evidently been thoughtfully meditating upon his Spanish history, when he told his sympathetic and, we may be sure, whimsically delighted teacher that "the windpipe, the bigoted Spaniards, and ants, suffer no foreign substance within their limits; but drive it out."

There are certain old tales of simpletons with which the Greeks used to amuse themselves that may still serve to impress the necessity of thinking all around a subject. A simpleton is one defective in the power of reasoning, one who would naturally not stop to think, as in the story that follows, that the wine must always sink to the bottom of the cask. The following translations are from the "Facetiæ" of Hierocles, who wrote them in the fifth century: —

"A simpleton had sealed up a vessel of Aminæan wine which he had. His servant having made a hole in the vessel beneath and drawn off some of the wine, he was astonished to see the contents diminish while the seal remained unbroken. A neighbor having told him to look whether it had not been taken out from below, he replied, 'Why you fool, it's the upper part, not the lower, that is missing.'"

"A simpleton, learning that the raven would live more than two hundred years, bought one and brought it up, that he might test the matter."

"A simpleton, wishing to teach his horse to be a small eater, gave him no food at all. At length the horse having starved to death, he exclaimed, 'I

have suffered a great loss, for now that he had just learned to go without eating he had to die.'"

"A simpleton went on board a boat on his horse's back; when some one asked the reason, he said, 'I want to cross the river in a hurry.'"

However, while we set children thinking over such problems as these, we must be careful that we do not mystify them too much. A little mystification, such as they can see through by a little effort, is as refreshing as a morning haze; but a deeper puzzle, one beyond their powers of penetration, is as stifling and unwholesome as a London fog.

We must be careful in all other ways also not to discourage this young activity of the mind. Just as we found we needed to encourage children in their attempts at observation, so now we find that we must encourage them to take the next step and seek for the cause of a series of observed facts. We should help them to test the possible extension of the series. An effort to confirm a theory arrived at as possibly explaining certain experiences, lends an intenser interest to all investigation and finally leads to classification, and thus to the lifting of the results of observation heretofore unorganized in the mind to the level of a science.

Facts observed thus in their causal sequence become organized knowledge. They are easily remembered because they are, as it were, a piece of the mind-stuff itself. A train of reasoning always makes memory clearer, because anything which makes us stumble over any portion of the line of thought brings up the premises from which it started. How often do we not say, for example, in the search for a forgotten date, "I remember now, that John's cold first showed itself on the fifteenth of February, because at the time I thought it was the result of his being out the night before, delivering valentines."

Not only observation and memory, but imagination, likewise, is aided by reason. True art, for example, commonly supposed to be dependent almost wholly upon the imagination, is in reality dependent upon a reasonable imagination. The persons who figure in a well-told story must act as they might reasonably be expected to do if the imaginary circumstances were real.

As to its relation to the moral nature, we find that at least two virtues wait for the advent of genuine reason: justice and truth. The necessity for them cannot be perceived by an illogical mind, and when the necessity is not perceived any exercise of these qualities must depend upon imitation and that incomplete but sometimes lofty form of reasoning which we call intuition. The more complete the links in the chain of thought which this intuition passes over so swiftly as to be unconscious of them, the more definite and nicely-balanced will be the justice that is meted out

and the clearer the truth that is seen and the better incorporated with the whole fabric of life.

In waiting for these virtues to appear in our children, then, we are in reality waiting for the development of a very high order of intellectual activity as well as the subordination of the will thereto. In the meantime, what? Shall our children be suffered to be unjust and untruthful? Yes; to the degree that they are not yet able to be otherwise.

Finally, we learn here as elsewhere that the chief lesson is for ourselves: We must learn to turn our own reason upon the problems of child training, and not to expect in our own little corner of the Universe an abrogation of the laws of growth. We must learn to understand these laws and bring them to our aid. We must learn to recognize the germs of great things — the minute beginnings of great law-obeying forces — which lie concealed in present trivialities. If in the process of this our growth, it becomes evident that our minds — otherwise content to settle into a peaceful wayside rut — must be disorganized in order to be reorganized, we must put up with a certain amount of dust and confusion and must not ask that through the shrouding clouds we shall often be able to see clearly the looming ideal. As James says, "The art of being wise is the art of knowing what to overlook."

THE IMAGINATION

We come now in due course to the imagination — that form of thinking which made our childhood's world so much brighter and better worth living in than the gray, work-a-day world of our later years. Full of images, indeed, our life still is, for, without them we could neither think nor speak, but they have lost something of their pristine freshness, and we something of delight in them. If we could preserve to our children the joy in creative thinking which has to some degree passed out of our own lives, we should indeed give them the fountain of eternal youth. To attempt this, is to attempt the culture of the imagination.

What are these images which we shall presently find to be so important to all forms of intellectual activity? They may be very untechnically and simply defined as a representation in consciousness, and at will, of objects previously seen. This definition may apply equally well to images stored in memory and to images used by the imagination. In the first case, the images are merely stored away for future reference; in the second, they are taken out, reëxamined, and recombined. Reason, indeed, does this also, but it does so in order to reach a given conclusion or, as we have seen, merely to experiment — to see

which images may be fitted deftly together. The imagination, on the contrary, juggles with them as does a child with a kaleidoscope.

We must not, however, fall into the too common error of supposing all images to be visual images. On the contrary, there are auditory images, tactual, and motor images, to say nothing of fainter images of the impressions produeed by the senses of taste and smell. The psychologists make mueh of the differences in these images and their relative importance in education; but interesting as their experiments are, it is sufficient for our purpose to know that all of our five senses, after giving rise to immediate sensations, leave behind them a set of secondary sensations known as images. These are merely the reeords in eonseiousness of sensations once experieneed, but they are now no longer sensations, but mind-stuff — true spiritual material with which the spiritual nature of man ean work — with whieh it can elothe and express itself.

If they are to serve such a high purpose it is evident at once that such images should be an accurate representation of the outer world and true to the relationships whieh constitute the true nature of that world. If the imagination is to be regarded as merely a commereial faeulty, the accuracy only of the image would be important, and the eulture of the imagination would be one with the eulture of elose observation. But if the imagination is to be a moral faculty, it must go further and beeome the servant of high spiritual discernment. Here we find the use of symbolic edueation, for symbolizing is an effort to make images not merely of faets but of truths. And since, as we have seen, expression reaets upon observation, this attempt to image things as truly seen in their relations, results in making the truth — whieh is the thing seen in its totality of relations — more vivid and ultimately more praetieal.

To sum up the different functions performed for human beings by the faculties of observation, memory, reason, and imagination we may picture to ourselves observation bringing the grain to mill, reason grinding it, and memory storing it away for future use. Imagination is the fairy who without disturbing it in the storeroom sets it growing again.

Probably the reason why this magic faeulty fell so low in the estimation of our Puritan forebears that it has never entirely reeovered its credit with the community, is the faet that it ean easily attain too luxuriant a growth. The remedy, however, lies not in suppressing the imagination but in stimulating observation and reason to a similar splendid growth, thus drawing the whole nature up to the level of its highest point of development rather than sinking it to the level of its lowest. The images within the mind are after all but fainter representations of the original sensations. The deepest dreamer among us all knows well when he wakes; reality ealls his soul more sharply than does

the most vivid dream. If, therefore, our children seem not to note this difference, we must call their attention to it, and by increasing at once the definiteness and intensity of their observation and their consciousness of their own reasoning processes, put the mind more thoroughly into possession of itself and of its true attitude toward the phenomenal world.

In doing so, however, we must be careful not to disturb the reality of the child's images. As before, our object is not to make the images less vivid but the observation more keen. Upon the intensity of these mental images, which, indeed, are all that the child's consciousness really possesses out of all the events and sights and sounds which have crowded upon him, his power of deep, clear, and consecutive thinking, of initiative and enthusiasm, depends. Therefore, to dim or blur his images by treating them as matters of small importance, is to deprive him to some degree of his right to possession of his own experiences. Without knowing why, children promptly resent any such interference, and often with signs of acute distress. I remember an illustration of this in my own family: My little daughter having received an addition to her family of dolls at Christmas time, out of the fullness of her heart gave one of them to her elder brother. Later her maternal affection for her abandoned offspring returned with such force that she demanded the doll back again, a demand which her brother, having been in possession for about a week, very naturally resisted. In great excitement they came to me to settle the difficulty. It was early in the morning, and I was sound asleep with the youngest boy beside me. Under such circumstances I felt quite incapable of displaying the wisdom of Solomon, but they insisted upon laying the case in full before me. Matters became still more complicated when Dorothy, in the midst of the discussion, perceived that her brother was holding on to the doll with all his might.

"*Now, Carleton!*" she fairly shouted, "You've let Helen (the doll) hear every word that we have been saying; do you suppose I wanted her to know that I had given her away? You have nearly broken my heart!"

"Well," protested Carleton, "did you suppose I was going to leave her in that other room all alone? It's cold in there."

Seeing that there was too much emotional excitement on their part, as well as too languid energies on mine, to permit of a proper settlement of so difficult a question, I said, somewhat peremptorily, "Children, put that doll away until after breakfast, and then we'll take an hour off to argue this thing out——" when I was interrupted by howls and sobs from the youngest boy, who until this moment, apparently, had been occupied in trying to continue his morning nap under difficulties.

"Why, what on earth is the matter?" I asked, in amazement at this fresh complication.

"You — you — called Helen a doll," he sobbed, "and she *isn't* a doll! she's a baby!"

But while it sometimes leads to puzzling situations like this, the imagination is, as a whole, conducive to happiness to a higher degree than any of the other mental activities. This is evident from the fact that all play is founded upon it, and that a child devoid of imagination would find almost no games of interest to him, except possibly a few games of skill. Merely as an additional factor, then, in the sum of human happiness, the faculty is worth cultivating.

Founded upon it, as nearly all plays are, none are more obviously so than the dramatic plays which form so large a part of the life of children, help them so greatly to form just estimates of people and things about them, and are generally of so high an educational value. We all know the delight children have in playing "statue-posers." In this game, one of the children, blindfolded, requests the representation of some quality, as anger, love, sadness, or joy. The other children immediately assume attitudes expressive of these emotions, and the blindfolded one then, removing her bandage, chooses one who has in her opinion most fittingly performed the task. It is evident at once how such a game would tend to make children more watchful of the faces and attitudes of persons about them, and quicker to interpret the signs of emotion; and this is true of all dramatic plays. Thus, dramatic ability is dependent upon clear imaging of details of conduct and the reasonable reproduction of them under artificial conditions.

Necessary to all forms of representation, we should expect, then, to find the imagination equally necessary to all effort at understanding. The child imitates the actions of an older person, for example, in the effort to make those actions his own and thus better to understand them. This is the reason why the little girl so persistently disciplines her doll — it is to get some comprehension of her mother's habitual attitude. The boy, in the same way, calls out roughly to his rocking-horse, "Git a-ap!" and "Whoa!" as if to discover by imitation of the teamster's loud voice and hectoring manner the reason why horses must be thus spoken to. In all dramatic representation, indeed, there can be detected something of this effort to understand. In some of the more progressive schools the great educational importance of this instinct has

been reeognized to the extent of providing for dramatie representation as a direct aid to study.

Not only by dramatie representation, but in all its phases the imagination is neeessary to the ehild at sehool. What could he understand of geography, for instance, if, having never seen the mountains or the sea, he eould not construet a mental pieture of them from what he knows of hills and small bodies of water? How eould he understand the deseription of an iceberg, if he eould not seleet from the images in his mind those that are essential to the formation of this idea? This is what is meant by a reasonable imagination, for in this proeess of building up a picture of an iceberg the child not only remembers and reeombines his past experiences, but he seleets from them those whieh are essential to the image which he is striving to ereate; and this eombined analysis and seleetion we have found to be a special funetion of the reason. In imagining an ieeberg, therefore, the child who has never seen one must colleet all the images of iec and its various properties and forms which have been stored away by the memory for some sueh purpose, and must analyze them and reject the properties whieh are not needed. For example, he will remember even the lemon ice served at table, but will rejeet the image of its taste as being unnecessary for his purpose. He must be further guided by his judgment in adding the quality of magnitude whieh is outside his experienee of iee but is within his experience of other things sueh as, perhaps, the sky — a quality absolutely neeessary to the image of an iceberg. The ability thus to make a clear and consistent mental pieture of an object whieh is not seen, not only develops the power to think logically and elearly, but it is directly necessary to any understanding of subjects not within immediate experienee. Without imagination, we should be able to know nothing outside of that small portion of life which is reached by our senses.

Having found imagination thus necessary to thinking, we naturally expect to find it neeessary to practical life, and this indeed is the case. He who cannot use the facts of formcr experience, for instanee, to picture the thing which he wishes to do in all its relations, including the result, eannot foresee either the requirements for the beginning of a pieee of work or the steps which lead to its completion. Thus the merchant must use his experience of the tastes of his customers in order to make a guess at the wares which they will buy. The inventor must have actual knowledge of eertain mechanical forces and must also be able to picture them in new combinations and predict their aetion — make the thing piece by piece in his mind and before he has begun foresee clearly what it will do. The arehiteet must know how the finished strueture will look before one stone is laid upon another. Seientific

invention, dealing with theories rather than with machines, must utilize already discovered laws to reveal hidden ones foreseen by the imagination. The statesman must combine his knowledge of men with his new policy in order to foresee how they will receive it. In short, imagination is necessary to any and every pursuit.

But while some degree of imagination is thus seen to be essential to all occupation, and therefore to exist to a greater or less degree in every human being, there is yet much difference in the power of the imagination in different individuals. If there could be such a thing as a great brain dealing with blurred and inadequate images, the product of its activity would be of much less value than a product of a similar brain dealing with clear and deep images. Indeed, one occasionally finds something of this sort among ignorant persons possessed of strong originality. They never rise to any height of thinking, though they usually feel within themselves the stir of latent power and make all sorts of abortive efforts to rise above the commonplace. They succeed somewhat, but they fail more. Any experience of life which would give them many clear and sharply differentiated images would set them free.

Recognizing the importance of images as a material out of which the whole intellectual life must necessarily be constructed, Col. Francis W. Parker has directed his whole school training to this end. By every possible device the children in his school are encouraged to form accurate and comprehensive images of all they see, hear, taste, smell, or touch. Their senses are all under a constant training; so that they increase both in acuteness and in power of discrimination with every year of the school-life. No verbal descriptions are allowed to take the place of actual experiences in the earlier grades, but are always the outgrowth of experience. For example, geography is studied first by means of field trips, during which the forces making the physical geography of the present may be seen actually at work; next in the laboratory where experiments are made, revealing at shorter range the action of these same agencies; then pictures are used; and last of all, verbal description. When one remembers that words have no meaning at all except as they are filled with the images of past observation, one perceives at once that this is sound pedagogy.

However unpedagogic most schools have been in their treatment of this faculty, they have not been slow in recognizing the value of repetition. They have employed it, to be sure, more as an aid to the memory than as an aid for the imagination, yet it is of as much importance in the one respect as in the other. A mental impression repeated many times becomes clearer and more intense with each repetition. This is the reason that children love so dearly to have stories told them over and over again and as nearly as possible in the same words. Each time the

story is told the images become more sharply defined and the story itself is thereby realized more vividly. Mr. Kipling's "Just So Stories" are excellent for this purpose. As he says of them, they were meant to be told "Just So." Any student of these stories will see with what skill he has repeated certain phrases in a fashion that at once puzzles and delights his young hearer. Many of the old folklore tales exhibit this peculiarity to a marked degree, as for example, "Snow White" with its recurring invocations of "The little mirror on the wall"; and this is another reason for the educational value of such literature.

Mental images are thus seen to serve an essential purpose in mental activity. Indeed there could be no mental activity without them. They are the material with which the mind deals. The senses alone take cognizance of facts outside of personal consciousness. Before the ego can deal with these facts they must be reported to the cerebrum and there transformed into images. Imagination thus takes the facts of the material world and spiritualizes them, transforming them into genuine substance — that which underlies experience and consciousness — then with these materials creating a world independent of time and space, yet having the appearance of it. It makes within the man a true spiritual world. Far back in the dim Middle Ages, Hermes Trismegistus saw this truth and proclaimed "There is nothing in the heavens which is not on earth in an earthly form, and there is nothing on the earth which is not in the heavens in a heavenly form." The faculty which perceives this relationship between the things of sense and the things of spirit is, no less than the reason, the imagination.

In the effort to cultivate this valuable faculty, there are two dangers for which we must be on the watch. One is the danger of too definite impressions which may define or limit the conception; the other, is of too vague ones which do not clarify the conception. In the first case, a child observing an object may be forced to observe it so closely and to form such a well-defined mental image of it as to lose hold of the fleeting similarities which first impressed him, and retain only the prosaic similarities which could fail to impress no one — thus missing the individual knowledge of the object and the perception of its more subtle qualities. This danger is especially to be apprehended when the child's teacher is of the systematic sort and requires each pupil in a class to render an account of a field trip, for example, according to a prearranged plan. In the second case, the vague image arises, either because the objects observed were observed out of their true order — that is, when the child's attention was engaged elsewhere — or because the child was not given sufficient time to form for himself a satisfactory image. Individual minds vary greatly in this respect, and the only safe rule is to leave a child in undisturbed contemplation of any object, thought, or event

until he is through with it. If from a mental image thus formed, a symbol should be evolved — a symbol being the recognition of the spiritual relationships of an image — such a symbol should itself be definite but of universal application. It is because it so entirely fulfils these requirements that Froebel makes so much of the ball in his system of symbolie education. It is a perfectly definite symbol for totality and unity, and yet it is of universal application.

This is the proper use of any symbol, for symbols express the relation of the external to the internal, the harmony of subject and object. This is most plainly seen in the use of language, for words are, of course, nothing but symbols. They are often, indeed, a symbol within a symbol, for the word itself in its direct meaning may be the symbol of a material object, and in its secondary meaning the symbol of a spiritual reality. As Emerson says, "The use of the outer creation is to give us language for the being and changes of the inner creation. Every word which is used to express a moral or intellectual fact, if traced to its root, is found to be borrowed from some material appearance.

"Right originally means straight; wrong means twisted; spirit primarily means wind; transgression, the crossing of a line; supercilious, the raising of the eyebrow; we say the heart to express emotion; the head to denote thought. Most of the process by which this transformation is made is hidden from us in the remote time when language was framed, but the same tendeney may be daily observed in the children."

Since, then, they serve so high a purpose it may well be believed that symbols are art-products as well as materials for art, and, as such, require artistie skill in the handling. Nevertheless, let us not hesitate to symbolize hastily and crudely upon occasion, lest we thus fail to lift our children to this higher form of imaginative thinking; but we may well give such efforts a light and playful character.

The great world symbols, whether met with in verse, story, or myth, should be handled more reverently, for we find upon examination, that there is, as might have been suspected, a world symbolism, intelligible to peoples of all races and tongues. Indeed, they are more closely united than world languages, for they are the material out of which languages have been formed. As Andrew Lang points out, convineingly, the nations that use the same symbols are too far apart geographically and racially to have borrowed from eaeh other, for we find the same great symbols in use by the Chinese and the Aztec, the Norseman and the Egyptian. This fact is shown in myth and folklore, in temples and customs, and indicates a universal recognition of the parallelism of the natural and spiritual worlds. To illustrate this point, we will mention very briefly four or five of such universally accepted

symbols. A knowledge of them lends new meaning to the traditional stories of the fireside and makes them serve us as they served the people from whom they were born — as an aid to spiritual insight.

Birds, as might be expected, have been regarded as the symbol of thoughts; they fly through the air as thoughts fly through the mind. Some of them are bright colored, some are dull, but all live in a free, wide element, having their nests in trees, the meaning of which we shall learn later. Yggdrasil, the World Ash, for example, has at its roots the spring of wisdom guarded by the Norns or Fates. Two swans, parents of all those on earth, float there. What are these two thoughts which are thus the parents of all other thoughts, if not the thought of the Me and the Not-Me — the two thoughts upon which self-consciousness and the consciousness of the world outside of self depend?

Not only in the garden of Eden grew the tree of knowledge, but in almost every country in the world there is a similar tree preserved in its mythology. Trees everywhere symbolize knowledge. Dante used them thus when he represented himself as being lost in a dreadful wood which obscured the light of day,— that is to say, his mind was so pressed upon and darkened by the many eruditions of his day, that he could not attain spiritual wisdom.

Mountains everywhere represent the inmost principle of the mind. We recognize this in our daily use of words, for we all know what it is to have a lofty character, to decide our conduct from elevated principles, to be high minded, or to be exalted. Thus we find that almost all nations have their holy mountain. We have ourselves adopted the Mt. Zion of the Jews. Christ was transfigured in a mountain, and it is only with the inmost principle of our mind that we can to-day see him glorified.

So commonly perceived is the significance of the serpent, and from such an immense antiquity does the perception of its significance date, that it has come to be a part of our instinctive feeling. We can not see an entirely harmless little garter-snake gliding away beneath the bushes without a thrill of something very like superstitious terror. But this is to know a serpent in only one of its meanings, for it is really the symbol of sensual knowing — hence the sign at once of evil and of wisdom. For to know sensually, merely, is to be evil, while yet all wisdom is based upon sensual knowledge. As the Chinese proverb has it, "He who shakes the bush rouses the serpent." The Greeks had exactly the same idea of the significance of the serpent when they bordered Pallas Athene's robe with serpents as a fit ornament and yet

made their tremendous statue of the Laocoön, setting it forth as a terrible warning to the people, a warning which they all read. The priest and his sons writhing in the fold of the enormous serpents were understood at once to mean that the spiritual truths of their religion were in danger of being stifled and overcome by the common reign of luxury and extravagance.

It is no wonder that some students of ancient religions and literatures have arrived, though in a somewhat headlong fashion, at the conclusion that all ancient religions and mythologies were based upon sun worship. For the sun is everywhere received as symbolic of the primal creative energy, its light symbolizing truth; and its heat, love. Therefore were all ancient temples sun temples. While it may be admitted that in many cases the sun worshipers took their worship literally and did not know the spiritual meaning back of the symbol, yet this was by no means always the case. In nearly all religions there was an inner circle of priests, who knew the significance of the symbol paraded before the people, and often this meaning was no secret, but was plain to all. The Assyrians, for example, in the opinion of so eminent an authority as Layard, worshiped the sun and the other heavenly bodies as types of the power and attributes of the Supreme Deity.

The light of the sun, as we have said, represents wisdom. We speak of the light of wisdom and of the conscience; we say that we see a truth; we have perfectly clear ideas of what we mean, when we speak of illumination, brilliancy, insight, or say that an argument is bright as day — or clear as crystal. We know also the opposite of these words and understand the shadow of a great affliction, the gloom of remorse, a darkened mind or heart. We use black as a color of mourning, and white to typify bridal joy.

Fire similarly represents love or desire, and this is true in all languages. In the ancient writings of the East, wherein the marriages of the gods and demigods are described, it is always said that the ceremony was performed in the presence of the god of fire. By all peoples, fire has been held to be the sacred emblem of God, who is Love itself. This is the reason why they kept in their temples consecrated and eternal fires. In our own language we habitually speak of persons who are inflamed by anger, or warm hearted, or glowing with enthusiasm, and we speak of those who lack this flame as cool headed and cold hearted.

It is obvious, then, that it is natural for man to symbolize, so much so, that the tendency has so far escaped analysis. It has been assumed that the effort of the mind to fly from the terror of sensations whose cause was not understood, was natural — that to attribute such a cause to a God was natural. We find it indeed so entirely natural that this

explanation sometimes suffices to wipe out all belief. When we are informed that our early savage ancestors, cowering and trembling within their caves, in terror of the storm passing by, attributed their thunder and lightning to the warfare of supernatural beings, we find the process of their thinking so natural that we leap to the conclusion that it was therefore invalid. Yet how absurd is such a conclusion! For if the mind processes are to be considered untenable because inevitable, we must discard belief in nature and finally in our own thinking. It is not inevitable for a dog or any of the lower creatures to see God and other spiritual powers hidden behind the storms, or riding triumphant through the clear and sunlit sky. It is inevitable for us — as inevitable as the process of reasoning itself. It is indeed, in its essence, the very condition of the highest reasoning.

Such spiritual interpretation of the world of matter is at the root of all great poetry, indeed of all great art. As Mrs. Browning says: —

> "We stand here, we,
> If genuine artists, witnessing for God's
> Complete, consummate, undivided work:
> That every natural flower which grows on earth,
> Implies a flower upon the spiritual side,
> Substantial, archetypal, all aglow,
> With blossoming causes,— not so far away,
> That we, whose spirit-sense is somewhat cleared,
> May catch at something of the bloom and breath,—
> Too vaguely apprehended, though indeed
> Still apprehended, consciously or not."

FITTING FOR LIFE

Parents who are themselves dreamers, who have never seen life in its real aspect, are likely to form a very lofty and noble ideal and spare no pains to fashion the character of their children upon it. Such persons direct their efforts most powerfully upon the moral nature, which is probably the most responsive and plastic part of the child. The ease with which one of these young creatures will accept moral theories of conduct, and his natural ability to understand them, must always fill a thoughtful parent with awe. It is not asserted that all children are equally responsive to moral teaching, but in virtuous surroundings all normal children are easily influenced in this direction. They may not be able to square their whole conduct to their teachings, but they earnestly wish to be good, and believe in goodness with all their hearts.

The children whose parents provide them such lofty ideals of conduct are also likely to receive a great deal of religious instruction, and upon arriving at the age where adolescence suddenly develops the emotional and spiritual natures, they commit themselves to a definite course of morals or religion by an open profession of some kind.

Unfortunately for such natures, the world is always particularly suspicious and exacting toward those who make such aspirations known, and these are persons of so sensitive and tender a disposition that the world's attitude is of great consequence to them. It is hardly to be wondered at if they find themselves unable to combat the difficulties in the way of realizing their high standards, and that so many who were religiously inclined in youth, are skeptical and often immoral in early manhood. It is indeed a delicate matter to point out the mistakes in moral and religious instruction, and perhaps a dangerous one to say that they are sometimes responsible for immorality and irreligion. Still there is always more to learn in all systems of education, and having found ourselves so often radically wrong in our methods of training body and mind, is it not possible that we may not have quite reached perfection in our methods of training the soul?

Ethics, or the moral nature of man and his obligations, were understood long before the sciences of physiology and psychology were thought of. And our moral code to-day is simply that of the most ancient peoples broadened, enlightened, and sweetened by Christianity. Surely it is reasonable to suppose that scientific methods and advanced thought may still add a little to, and clarify a great deal, the world's knowledge of man's moral nature, or at least the application to it of the laws of Christian ethics. For to some of us events seem to prove that we have not always taught morals in the way to make them most powerful in the sight of the learner. Indeed, does any parent or teacher expect the child to retain through life exactly the same moral standards he is taught in childhood? Do we not intentionally exaggerate, as it were, all our moral teaching, unconsciously making allowance for the shrinkage of experience? Take the child of dreamy and impractical, conscientious parents. He receives a very perfect moral code, he is taught that truth is absolute, honor uncompromising, justice just, and mercy tender. He can no more practice these virtues in this unadulterated state than he can visit the stars. Is it any wonder that in the maze of compromises and confusions through which experience leads these virtues of his, he sometimes concludes they are wholly mistaken?

Children are never systematically taught that "circumstances alter cases," that "half a loaf is better than no bread," that "Justice is blind," that "things are not what they seem," that "wolves wear sheep's clothing," that "evil is often good perverted," and many another maxim

of worldly wisdom which life proves to every man and woman of us, sooner or later. We reserve all knowledge of contradictions and exceptions for the future, and for all their instruction in morals send our children into life utterly ignorant of the true conditions.

Is it not true that any man who has ideals above the average, and more than the usual number of scruples, must invariably pay for his possession in failures and misconception? Is it not a phenomenal thing when the man in any community who has the loftiest ideals and leads the highest life has most influence? Is it not also true that the practice of ideal virtue sets a man apart — not only in his life, but in his sympathies? Does not this aloofness, this separateness, destroy his usefulness? Usefulness is of course a relative term, and there is a question whether a man best fulfils his duty by living up to a high standard and "setting an example" to his fellow-man, or by a closer and more sympathetic relation with him.

If we think most of the perfection and salvation of the individual, the hermit is the most successful type of man. If we think most of brotherhood, of mutual experience, of "exchange of gifts" between all classes and conditions, we may find some cause to esteem a class of men hitherto much criticised — among them the politician, and the good fellow. Perhaps it is as useful a thing in its way to be a good compromiser as to be a good example.

It is not possible to go very far in such speculations without great risk of heresy. Still, parents, above all persons, should study the actual conditions of life, if they desire to fit their children for it. And this train of thought was started in the hope of leading as gently as may be to the suggestion of possible faults in our way of teaching morals to our children.

Scientists tell us that our finer faculties, like our finer muscles, are the latest to develop. Though we may grasp moral truths and love high ideals in our childhood and youth, it is not until maturity that we come to our full moral stature. Our ethical training all seems to have been founded on the opposite hypothesis, since we require children to walk much more uprightly before God than any grown person is expected to do. In the one particular of truthfulness, for instance, the average child is invariably judged much more strictly than any adult — even though the latter be his own parents.

Another thing: how is it possible to give any child a very thorough course of instruction in good conduct without giving him a corresponding knowledge of evil? The child who hears a great deal about the obligation to tell the truth gets a pretty extended knowledge of lies. The boy or girl who is constantly admonished to be pure minded must have some conception of evil mindedness; the child to whom his parents

preach honesty learns that there is much dishonesty in the world, and so on. Any one of us who was brought up by high ideals of character in youth will recall that we were constantly measuring other people by them, and were unsparing of our criticism of those who fell below the standard. And is not this the practice, not only of young people, but of all moralists, who make a more exhaustive study of the philosophy of right living than of its actual relations with the rest of the world?

We do not set to work to *teach* our children *how* to be healthy,—we provide them with nourishment and healthful surroundings, and we wait for the natural result. It is only when disease presents itself that we disturb ourselves or our little ones with anxieties about the health, and appropriate remedies. We treat good health as the natural and normal condition and let it alone. It is possible that we might get better results if we allowed the moral nature to develop itself in the same way; if we looked upon goodness as a natural and normal state and only concerned ourselves with evil when it occurs, as we do with disease.

When a teacher wants to teach a child to spell he does not say, "Now d-o-w-g is the wrong way to spell 'dog,'" he simply gives the right way, and banishes all others from the child's mind. Perhaps a child who was brought up simply and naturally, without any teaching of ethical ideals, but as if right conduct were as normal as good eyesight, would form as stable habits of character as one who had had much teaching. There is no question that it is such habits of right conduct, and not the knowledge of moral obligations, which hold a man in time of stress. Besides, the child who is taught arbitrary rules of conduct is always made to believe that a compromise is deadly sin, yet experience actually compels him to compromise often. Having been obliged to do so, his conscience punishes him, and he is likely to feel that having fallen from his high original state it is hopeless for him ever to try to regain it; while the truth is that it is the power to rise after a fall, which tests the character. This necessity of rising on the "stepping stones of their dead selves" we fear to point out to children, because it is our policy to keep out of their minds all knowledge of possible difficulty and failure in living up to ideals. Would it not be more rational to reserve the ideals until such time as we may disclose the true conditions under which they are to be practised?

In our efforts to do our own duty by our children we parents often forget the helpful, ever present, ever reliable co-laborers we have in the best books. They dare to give children the truth about the struggles and failures of life, and we could safely trust them to form the ideals and standards, while we concentrate our efforts upon surroundings and influences, and permit our children to be moral just as we permit them to be healthy — naturally, without urging or anxiety.

Mr. Spencer argues that it is a paramount duty of parents to fit their children for what is called "success in the world." This would involve the study of actual conditions on the part of parents, and some preparation of the child to meet them. While none of us would be quite willing to teach our children what average morality and wordly standards really are, might we not compromise by giving them a slightly more practical knowledge of virtue? Teach it as a means of conquering the world, rather than as a separation from it.

Such qualities, for example, as industry, perseverance, alertness, judgment, self-denial, and self-control, which are practically inseparable from worldly success, are very near akin to virtues, but strange to say are not always present in connection with the loftier and finer qualities which characterize the unsuccessful good man. We nearly always find the successful man a little blind to the highest virtues, and the virtuous man a little deficient in the more practical ones. There is no doubt that we might, if we could find a method of combining high moral ideals, practical qualities, and a clear understanding of the conditions of life with knowledge of human nature and sympathy, produce a generation of men who would make virtue easier for all who might follow them. This would be a higher motive for the mothers of the present than the success in creating single good men and women. For it is not the exceptional cases of goodness, which are tossed out of the current of life by their inability to mix with it, but the goodness which adds itself to the average, that counts in the final sum of world forces.

This should encourage mothers to look a little more charitably upon the faults of children. When Samuel tells a story to shield a playmate, do not lose sight of the generous impulse, in alarm at the lie. When Bessie disobeys the injunction to come straight home from school, and stops to talk with other children, remember that while disobedience is bad, the social impulse is good. These examples might be followed by innumerable common instances of childish sins which are prompted by virtues. It is the mistaken treatment of this kind of faults that so often produces that form of virtue which the world rejects. As all children are subject to them, and as there seems to be no way to forewarn them of the temptation to do wrong which arises from an impulse to do right, it might be wiser to give children no general moral teaching, but to reserve it for particular occasions and give only necessary quantities — as one does with medicine.

When the spiritual and moral faculties are more fully developed in the course of nature, general moral teaching will be more easy for them to assimilate and apply. It will then be possible to let the young people into all the secrets of temptation, and struggle, and failure, and to lead them to feel that when they have reached a vantage ground of virtue

they must lift up their companions, not use it as a lookout upon the faults of others. They will then have the maturity of mental powers which will enable them to think out the inconsistencies of preaching and practice, and they will go cautiously forward, with far less danger of falling into that disbelief of all moral standards which menaces those who have formed ideals too early and too ignorantly.

If parents do their whole duty in example and surroundings, their children are unlikely to find much difficulty in being good, and, as was said before, this habit once formed is stronger than any number of high ideals. An ideal may be formed quickly and it may be changed quickly; a habit is a matter of years in making, and of years of effort in breaking. The child who is protected from the knowledge, association, and temptation of evil will unconsciously build for himself a standard which may lie unexpressed until he has reached that stage of development which requires him to measure conduct by it, when he will find it in his soul, as much a part of him as is the habit of right action.

This natural, or normal goodness, though often compared to normal health, is not quite so involuntary a thing as physical well-being. It must grow out of the child's inclination or be the product of his will, but need seem none the less natural therefor. Perhaps the very strongest influence in making goodness natural to children is the suggestion of maturer minds; those who are always expected to be good are likely to be so; while those who are suspected of evil, watched, accused, and doubted, are prone to fulfil that expectation.

It is only since Froebel that the social nature of the child has been treated with respect by philosopher and pedagogue. Yet no education which is intended to fit him for success in life could be complete without developing the social instincts. Every man's usefulness in this world depends upon his power to reach and to influence others, whether by his genius or his personality. As geniuses are few, and not to be certainly recognized in childhood, it is well to educate every child in the power to impress his personality upon others. This involves the recognition of that quality which we call individuality, and the originality which may go along with it. As our public school system still tends to produce uniformity of attainments and conduct in all children, it follows that originality gets its development in the home training. And this has its advantages, for mothers are more likely to look with sympathy upon manifestations of individuality than teachers, who have so many children in their care, could be expected to do; yet it often happens that genuine originality, characteristics of action and point of view which would be a source of freshness and power in an adult, are often met with mismanagement, repressed, or perverted, and a lifelong advantage thus lost to the children who possessed them.

We see this most frequently, perhaps, in the case of a little girl who is noisy, impulsive, and prone to tastes that surprise her female relatives. (There are still many good women in the world who insist that every female child must have what is called a feminine character.) Nature has always shown a great deal of scorn for their opinion, for in every generation she produces, not a few sporadic cases, but a very great many girls whose natural tendencies are all the other way. This might well be taken as conclusive proof that she, or the great Creator behind her, has some use for the "tomboy" girls and strong-minded women.

Mothers and teachers of such little girls will generally agree that they have good minds, warm hearts, and many strong traits of character. Who does not know one of these strong-souled, clear-headed, brave, and helpful women, who was a tomboy in childhood, was bitterly criticised in youth for queer and unfeminine qualities, but who proved herself in time noble and useful by the very force of the characteristics so often undervalued? If all women had remained faithful to the feminine type since the world began, we should probably still be carrying burdens and wearing the cart yoke with cattle. It is not that mothers and teachers make the effort to teach this kind of girls to adopt the truly feminine qualities, but they think their first duty is to destroy what they call the masculine ones. They do not reflect that all that is essentially womanly may be engrafted upon a masculine character, and the result be harmonious. They not only meet with difficulties in teaching the brave girl-child to be timid, the frank one to conceal her feelings and intentions, the interested and confident and clear-headed one to bear herself with the humility of ignorance, but because they persist in these mistaken ends they often destroy or pervert the nobler traits.

On the other hand, a similar course pursued with the feminine-minded boy may spoil something quite as fine and useful. Such a boy should be taught the strong and bold characteristics of men, but never at the expense of any fine inherent quality. If we could only see that it is our task to *develop* our children, not to *change* them, how much the world would gain in originality and enthusiasm!

We should remember, also, that little rudenesses and crudities of manner in children are often closely related to peculiarities of temperament; for some of them there is absolutely no remedy but experience. Thus, two shy boys have been known to play ball together for a whole afternoon without the exchange of a word beyond what was absolutely necessary to the game. A nervous and impatient mother might observe this with great anxiety as to the social future of her son, but she need not despair because she is powerless to remedy the fault. It is one of many cases where the idiosyncrasies of childhood are puzzling, but of a kind that pass away; and it is not wise to notice them. The mother of such a