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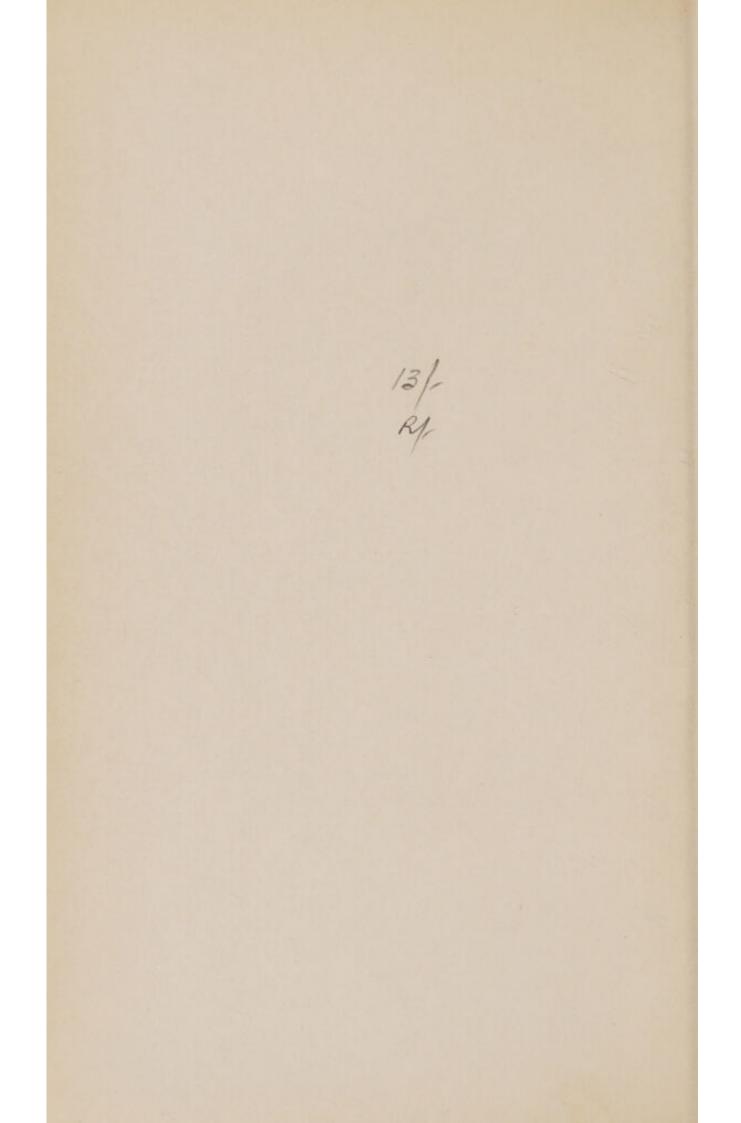
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The PSYCHOLOGICAL ORIGIN AND TREATMENT OF ENURESIS

BY

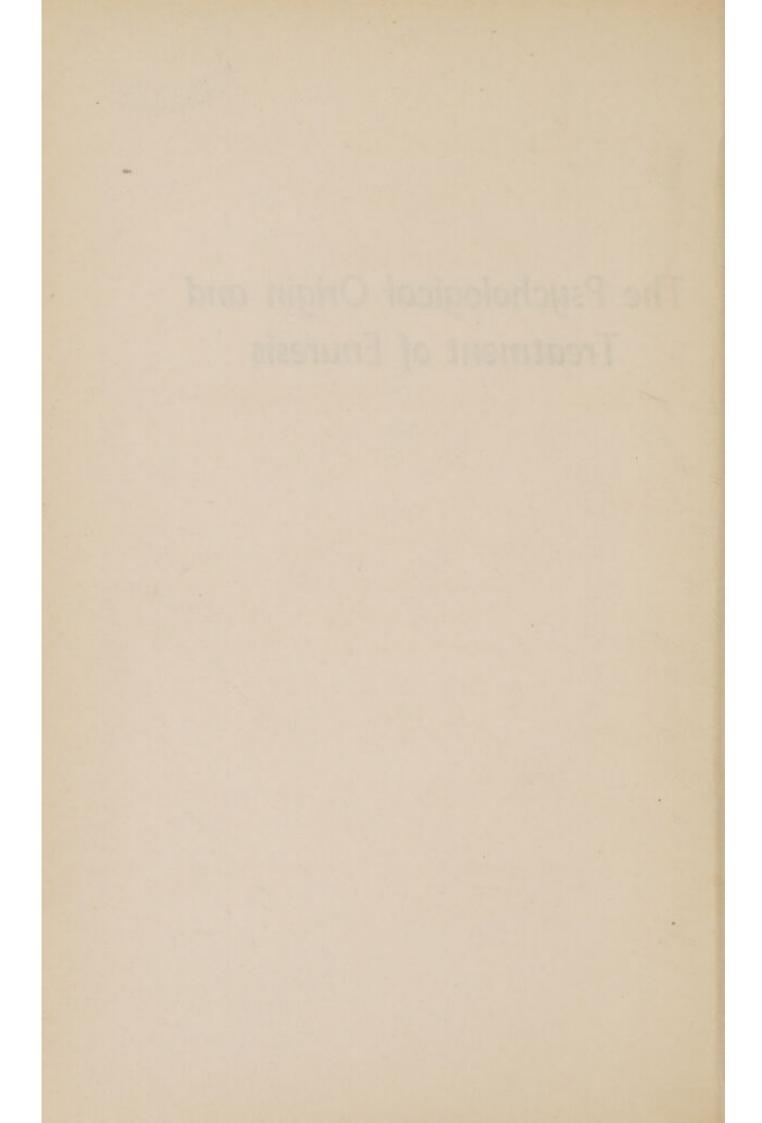
STEVENSON SMITH, PH.D.







The Psychological Origin and Treatment of Enuresis



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A Practical Discussion of Bed-wetting .

by

STEVENSON SMITH, Ph.D.

with Forewords by Edwin Ray Guthrie, Ph.D., LL.D. and Walter B. Seelye, M.D.

1948

UNIVERSITY OF WASHINGTON PRESS

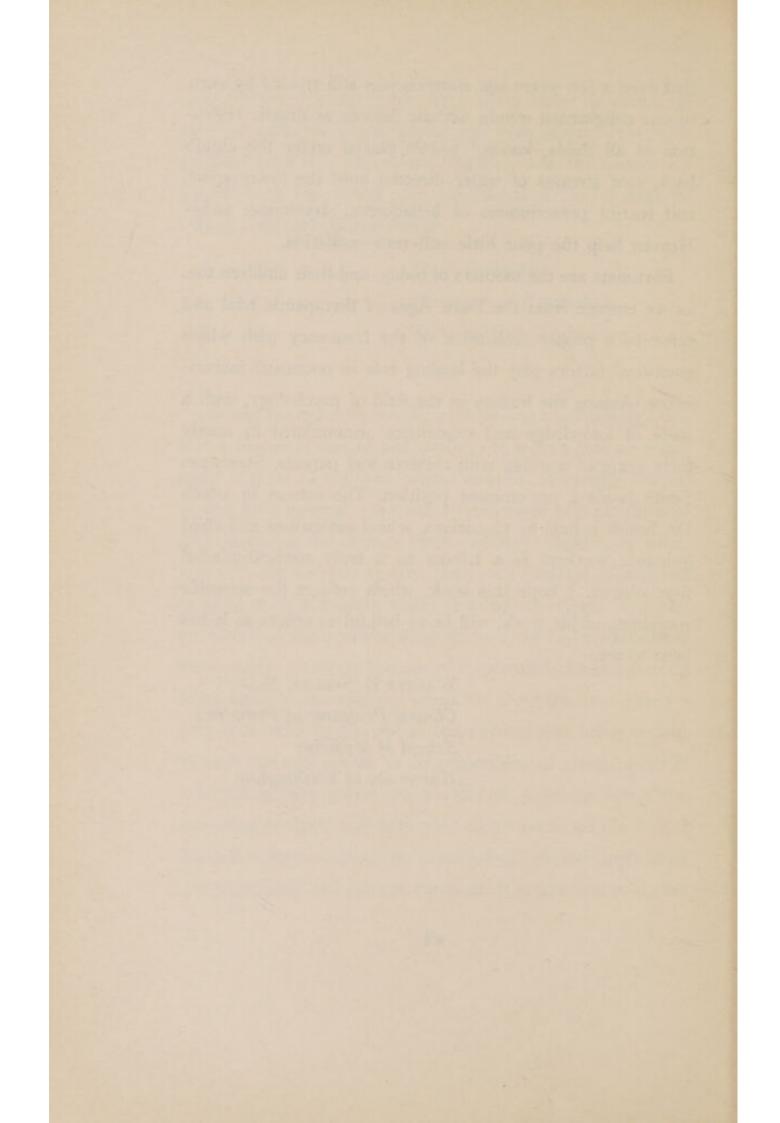
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that even a few years ago enuresis was still treated by such, to our enlightened minds, archaic devices as drastic restriction of all fluids, knotted towels placed under the child's back, cold streams of water directed onto the lower spine, and fearful prescriptions of belladonna, strychnine, and— Heaven help the poor little sufferers—asafetida.

Fortunate are the mothers of today, and their children too, as we emerge from the Dark Ages of therapeutic trial and error to a proper realization of the frequency with which emotional factors play the leading role in nocturnal incontinence. Among the leaders in the field of psychology, with a store of knowledge and experience accumulated in nearly forty years of working with children and parents, Stevenson Smith holds a pre-eminent position. The esteem in which Dr. Smith is held by physicians, school authorities and child guidance workers is a tribute to a truly medical-minded psychologist. I hope this book, which reflects the scientific soundness of his work, will be as helpful to others as it has been to me.

> WALTER B. SEELYE, M.D. Clinical Professor of Pediatrics School of Medicine University of Washington

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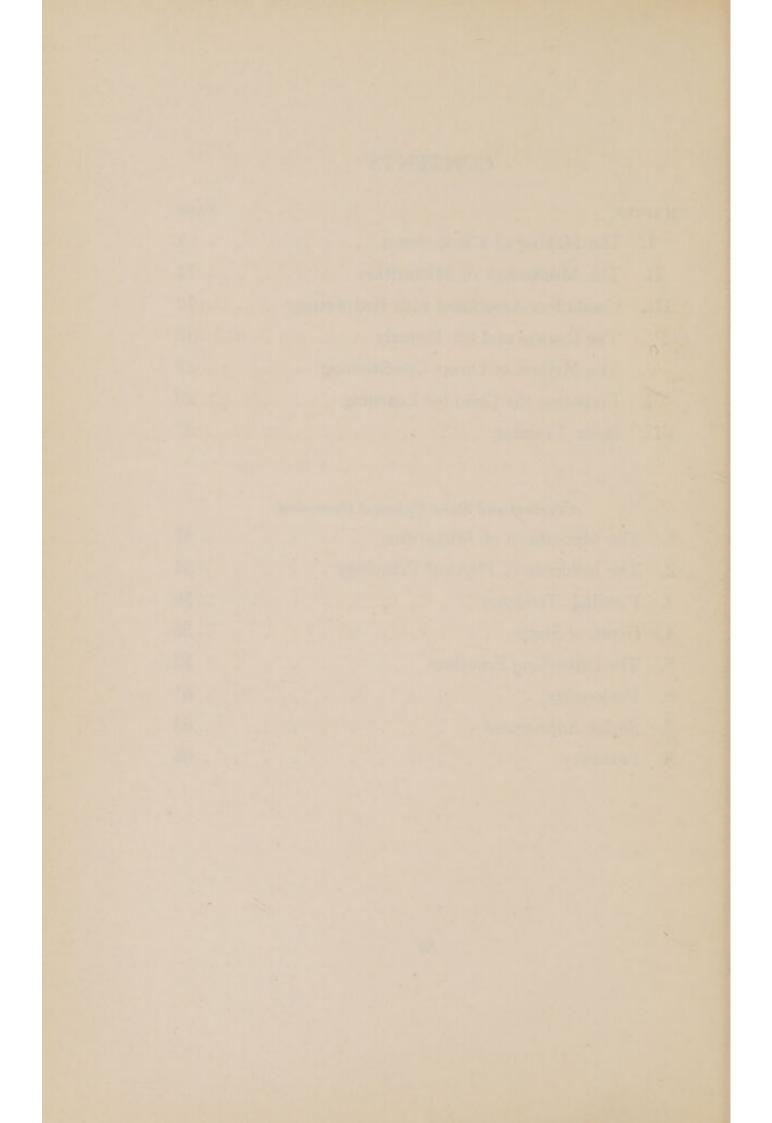


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The Psychological Origin and Treatment of Enuresis

I. THE MAKING OF A BED-WETTER

NOON AFTER your baby was born a nurse pinned diapers on him. He wasn't changed every time he was wet because he emptied his bladder so often that keeping him dry would have interfered with his sleep. When you began taking care of him yourself you changed him when you took him up, after feedings, before tucking him in, and whenever he was awake and you noticed that he needed it. You found that he did not urinate as often while asleep as while awake. When he was three or four months old you may have begun his toilet training. You were most interested in his learning to control his bowel eliminations, for you were a little tired of soiled diapers. You held him hopefully on a vessel or a small toilet seat after feedings and when he first awoke in the morning. You gradually came to know how to time his visits to the toilet to make them most effective, and a few months later you began to call a soiled diaper an accident.

The baby still wet himself, but by the time he could sit on the small toilet seat without needing support you began placing him there more frequently. Sometimes this was without avail and you left him there until he became fretful, and

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when he sat at the toilet, and if properly timed it soon became a conditioner of the act of urination. But it was the toilet itself that became the primary conditioner. The pressure of the toilet seat, the partial absence of clothing, the posture he assumed, the familiar appearance of the bathroom as viewed from that position—all contributed to the likelihood that he would urinate.

Although all these conditioning stimuli favored his urinating at the toilet, they did not prevent his wetting himself when he was away from the toilet. An essential part of his learning was his coming to demand that he be taken to the toilet when bladder pressure increased to the danger point. This he came to do because you had previously stimulated him to do something other than void at these times. Knowing of his need, you had encouraged him to hold out his arms to be picked up, to say the word that expressed the need, and to make many little preparatory movements and shifts of posture that served to prevent his relaxing the sphincter muscles that hold back the flow of urine. Voiding usually begins while the baby is momentarily at rest and somewhat relaxed, and most activity makes voiding less likely unless bladder pressure is very great. The movements which regularly precede his being taken up become increasingly potent as conditioners to prevent bladder release. But if he frequently thus makes a bid to be taken to the toilet and then is disregarded and proceeds to wet himself, these very movements that would have prevented an accident lose their potency and become a

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signal for voiding. If parents are ordinarily watchful, and not too busy with other things to take an infant up when he wants to go, he may seldom wet himself while awake after his first birthday.

It makes little difference to a baby whether he urinates at the toilet or in his crib or in his playpen. Voiding is a pleasure anywhere, and the mild discomfort of being cold afterwards does not follow being wet soon enough to be an important factor in training him to dry habits. His learning to control his bladder while in places that we deem inappropriate for voiding is almost entirely the result of how his parents behave toward him in these circumstances. If they catch him often enough with a moderately full bladder, and if in an unhurried way they get his attention and tell him invitingly that he is going to the toilet, he will respond by movements that later come to be aroused by a full bladder alone. These movements inhibit voiding because they interfere with the baby's taking up or maintaining the posture in which he is accustomed to void. Later these movements are elaborated into the ordinary demand of the older child to be carried or accompanied to the toilet.

Wise parents avoid feeling anxiety toward remotely possible trouble. They do not hesitate on occasion to waken the baby and romp with him at midnight, and they do not fear that he won't go back to sleep. They do not became tense when he cries and they do not croon over him when he has a bump. They take ordinary precautions but do not worry when he has a slight temperature. They do not disconnect door bells or muffle the phone to prevent his being disturbed. They give parties as usual. To be sure, they look with disfavor upon guests with colds and discourage visitors from kissing the child, but they enjoy their baby and do not show undue solicitude.

Foolish parents, on the other hand, provide an artificial world for the infant and are ever alert to keep the real world from disturbing the ensuing unstable equilibrium. One of their mistakes is taking the child to the toilet at night without thoroughly wakening him. This is their cautious way of avoiding trouble, little realizing that they are thus training him to urinate in his sleep. Clinical histories indicate that the great majority of bed-wetters have at one time or another been so trained. These parents' lack of confidence in the world and in themselves is highly contagious, and the baby becomes anxious. Anxiety induces failure because it has accompanied inappropriate responses in the past and has come to condition them. Defeatism is a state of readiness to fail. Habits of doing the wrong thing easily become chronic in a home atmosphere of worry and uncertainty.

You may have had all this in mind when your child was a baby, and as a result you may have been able to leave off his diapers during the daytime while other children of the same age were wearing theirs. Or, you may have been anxious and irritable and have lacked that gay confidence in babies that all babies thrive on. You may, indeed, have scolded when the

little fellow was wet and thus have planted the seeds of guilt and defeatism in his soul, or at least in the cerebral control of his autonomic nervous system. Some exasperated parents have seized their chance to spank wet one-year-olds while changing them. Anxiety tends to release the bladder contents, as seen even in the case of grown men in battle. If you add anxiety to your child's already inadequate habit equipment, much ground is lost. An emotional upset followed by failure is not conducive to success next time. Nevertheless, even if your two-year-old had for a while to walk spraddle legged because of his diaper-stuffed clothing, he finally became dependable while awake. Only the existence of a physical condition that demands medical attention, or the use of the most unenlightened methods of management, can keep a mentally normal child from finally developing bladder control during his waking hours.

When a child is asleep we are dealing with a different situation and a different problem. One thing, however, is the same. The child asleep and awake has the same parents. If their methods are inadequate for day training, they are not likely to be very good for night training. This is one reason why older bed-wetting children have usually been slow in developing daytime control. Another reason is that there is probably some variation from child to child in innate ability to learn dry habits.

There are two ways in which a child may preserve a dry bed. He may waken and go to the bathroom in response to a

distended bladder, or he may sleep throughout the night and yet keep his bladder outlet closed regardless of moderate bladder pressure. All children who now habitually sleep the night through without an accident learned at one time to waken and go to the toilet in response to a full bladder. Their pressure tolerance gradually increased as they deferred wakening and rising, until finally they did not void until morning. This all comes about very naturally in any child's development, provided that he has been trained to waken and get up when his bladder is fairly full and before he has wet the bed. His daytime habits have considerable influence on his nighttime behavior. If while awake he is restless until he successfully reaches the toilet, he is likely to be restless and hence to waken when his bladder becomes full at night. This daytime habit by no means insures his wakening, however. He may sleep through the restlessness and void in his sleep. If he does this very often, the restlessness soon ceases to prevent voiding and becomes, in fact, a signal for voiding. As in the case of the baby whose mother disregards his overture to be taken up, he comes to condition his wetting himself upon the very cues that should have conditioned his retention of urine.

The parents of the bed-wetter try one plan after another. Each of these may almost succeed—but not quite; and to each of them the child thus becomes negatively adapted so that he is further than ever from a cure. As in all unsuccessful training, the learner becomes more and more oblivious to the stimuli that were used to no avail. If a dog continues to run away while we call him; if men smoke in garages where there are signs that request them not to do so; if the fox smells the bait but turns away from it; if pedestrians cross the street against the red light, we say that the means employed to secure each result has failed. But this is not all. Any means used ineffectually to influence others has in the process become reduced in effectiveness. It may, indeed, come to produce quite the opposite effect on those with whom it has failed; the dog may run from us when we call; the nosmoking sign may prompt a man to take a cigaret; the smell of bait may frighten the fox away; the pedestrian may finally take pleasure in violating traffic signals.

If parents' attempts to check the bed-wetting habit continue to fail, the habit becomes more and more firmly established by reason of these attempts. The state of mind and body into which a child is thrown by scolding or punishment, or even by sympathetic encouragement and planning, when followed by wetting, becomes a state that invites wetting. Being afraid or ashamed or depressed, or being filled with high resolve to do better, might in another child lead to good results, but not so in the case of a child in whom these states have too often been aroused only as an antecedent to his voiding in bed. The bed-wetter who for years has sustained the impact of unsuccessful attempts to check his habit has learned to wet the bed under almost all circumstances, and has then been made very difficult to cure.

By the time the parents, with the best intentions in the

II. THE MECHANISM OF MICTURITION

THE BLADDER is a collapsible storage bag. Urine, continuously discharged from the kidneys, enters at the upper end of the bladder and escapes periodically from the lower end during the act of micturition. When the infant's bladder pressure builds up to a certain point, the muscles that close the outlet relax. When the bladder is empty, they contract again. While the nerve connections that control this rhythm are not so simple as the electrical wiring of the temperature regulator that turns the furnace off and on when the living room becomes too warm or too cool, both systems operate on the same principle. Gradually, through learning, still more nervous connections are formed that cause the bladder outlet to open or to remain closed in response to situations that have nothing to do with bladder pressure. The bedwetter is a person whose nervous system, through learning, has been so structured, that his bladder responds to inappropriate circumstances.

III. CONDITIONS ASSOCIATED WITH BED-WETTING

A LTHOUGH most bed-wetters are in ordinarily good health, some of them are sick in ways that make bedwetting likely to occur. A child should have as complete a medical examination as is necessary to reveal or to rule out the presence of any disease conditions.

To some degree bed-wetting runs in families. We do not know to what extent hereditary factors are responsible, but in any case, hereditary predisposition does not seriously affect the likelihood of a prompt recovery.

Rich and poor alike have enuretic children. Bright or dull, children have about the same liability to the habit. It is the spirit that exists in the household that has most to do with producing wet or dry beds.

Bed-wetters seem to sleep more soundly than other children, but there is considerable reason to think that this is only a learned resistance to being aroused by the parent or by a full bladder, just as some persons sleep through the ringing of the alarm clock while others rise at once; but those who rise are probably not lighter sleepers than those who disregard the bell.

The chronic bed-wetter is usually beset with anxieties of which his parents have scant knowledge and less understanding. These contribute in one way or another to maintain the habit. They should be dispelled for the child's general good as well as for the sake of speeding up recovery. Bed-wetters are more likely than other children to be in permanent parental disfavor. This is due not so much to the disagreeableness of their habit as to the character of their parents. Wet or dry, there would be little love lost on many of these children, as far as their parents are concerned. Even a mild degree of parental rejection is highly unfavorable to recovery.

More fears, jealousies, and worries are found among enuretic children than among others. On the whole, they get into more behavior difficulties and have more nervous habits than do dry children. The unfavorable home atmosphere that produced the bed-wetting is largely responsible for the other faults, but the other faults, in turn, make the cure of bedwetting more difficult. A child who is "in wrong" has a feeling of guilt, which in turn discourages good conduct and is favorable to enuresis.

A larger proportion of bed-wetters than of dry children are suspected of masturbation, but in some degrees this is because the bed-wetters are more carefully studied. If any relation exists between the two habits, it may well be due to the anxiety that masturbators feel, or to an inadequate parental understanding that favors the occurrence of both conditions.

We have no positive proof that the parents of bed-wetters as a group are more lacking than other parents in those traits which endear them to their children, but clinical studies lead us to believe that this is true. Tensions, animosities, and

V. THE METHOD OF DIRECT CONDITIONING

WHEN PARENTS get their child up at night they seldom catch him when he is just about to urinate. It would be well if they could do so, for then the stimulus of almost untolerated bladder pressure would gradually become the cue for the child's waking and going to the toilet. It might be still better if they could arouse him just as he is beginning to urinate, for then the first dribbling of urine would soon become the conditioned signal for contracting the urinary sphincters and for wakening. If he is caught in the act and then and there caused to reverse his behavior, he will usually break his bed-wetting habit.

What we need then is some device that will waken a child the moment he starts to wet the bed. A number of contrivances have been devised for this purpose. The United States Patent Office records show several impractical gadgets and one or two cumbersome but usable machines intended to cure, or at least control, enuresis. It was not, however, until Professor Mowrer of Harvard University and Mrs. Mowrer made their very practical apparatus that the method of direct conditioning was given a scientific tryout.

The Mowrer apparatus rings a bell when the child wets the specially constructed pad on which he sleeps. When thus wakened, he cuts off the flow of urine shortly after he starts to urinate, and then goes to the toilet. In time he usually comes to cut off the flow of urine as a result of the stimuli he gives himself in starting to urinate. When this occurs before the bell rings, and when the response of stopping becomes firmly conditioned to the stimuli of being about to urinate in bed, the child's bed-wetting ceases, and the use of the pad is discontinued.

The Mowrer apparatus (26) is beautifully simple. Wetting the pad completes a circuit from a B-battery and actuates a relay. The relay, in turn, closes the dry-cell circuit and rings the bell. Thus the current used is too weak to be dangerous or even to be perceptible. The pad is constructed of two sheets of bronze screening separated by two thicknesses of heavy cotton cloth and covered on the top side with a single thickness of the same absorbent material. Insulated wires lead from the two pieces of bronze screening and plug into the relay circuit which, along with the bell and batteries, is conveniently housed in a small, locked box.

The child sleeps directly on the pad while wearing only his pajama top, there being no night clothes worn below the waist. When he wets the pad he is at once wakened either by the bell or, while the bell is still ringing, by an adult who sleeps in the same room. The bell alone soon comes to arouse him. He rises immediately, disconnects the pad, and goes to the bathroom. A dry pad is substituted for the wet one, and the child goes back to bed. The wet pad is dried by heat and for a surprisingly long time develops no objectionable odor. The child is encouraged to go to the bathroom whenever he wakens in the night whether he feels any urgency or not.

VI. PREPARING THE CHILD FOR LEARNING

BECAUSE MANY PARENTS do not have access to competent professional consultation or service, and because parental understanding and cooperation are prerequisites to success even with professional aid, it seems wise to attempt here to lay down some of the rules which should be followed in assisting a child to overcome his bed-wetting.

First, if you have not already done so, have your physician see the child in order to find out whether there is some physical condition which needs treatment.

Second, do not use a training aid without professional supervision until you have radically changed yourself and your methods of dealing with the child. Remember that you have made the child what he is by being what you are.

Third, get rid of your moralistic attitude and become realistic and objective. Be careful not to rise to your own defense when your better judgment tells you that you are far from being a skillful parent. Determine how you can change your ways of thinking and acting toward your children to ways that will make the children more wholesome and more responsible. What follows is an attempt to help you to do this.

Discipline is no problem if your child is exuberantly devoted to you. When you become the right sort of parent, this is what he will be. When you have reformed yourself, you need not *worry* about his being obedient or dependable. He will then be suggestible and relatively free from resistance and will require but little urging. He will be full of the enthusiasms on which children thrive. But it is not easy to be the right sort of parent.

Successful parents are interesting to their children and quite unconsciously secure their children's affection. They do not scold. They are concerned with their children's achievements, not with their shortcomings. They mean what they say, but they say it pleasantly. They are moral but they do not moralize. They enjoy life and share this enjoyment with their children.

How then can you make yourself an interesting person to your family? There is no secret about this. You do it in the way that makes you congenial to your guests. With them you preserve an easy affability. You let them do their share of the talking. What you say is not a boring repetition of what they have heard you say many times before. You avoid argument. You are graciously polite and considerate. You do not point out poor grammar or bad table manners. You do not tease members of your family with the idea that this will amuse your guests. You avoid making anyone uncomfortable. You never lost your temper or your urbanity, and everyone has a lovely evening. Your guests go home with an exalted opinion of your charm.

Next morning you get up and complain about the coffee, scold Junior for being slow in dressing, and try to compensate for your feeling of domestic incompetence by haranguing your family at a high moral level. The guests have left and

annoys a good housekeeper because she has the habit of turning off faucets. The fountain in the garden makes a similar sound, but she finds this pleasing because it calls out no act of interference. Those who constantly attempt to change children's ways are chronically annoyed by children, for most of their attempts are futile. In return, the children are irritated by these grownups and quickly devise means of evading control. Very shortly everyone in the house becomes rude and ill-natured. The children grow increasingly annoying, and the parents progressively inept. This absurd situation is occasionally punctuated by a showdown of physical strength. The parents scream and the children weep and after a lull the cycle starts over again.

As the children grow older they grow brighter and stronger and finally at adolescence arrive at a level of equality with their parents in terms of brains and muscle. If the family group has survived this long, the parents are in for a further beating. Their children are now quite out of hand. Living at home is a necessary inconvenience which the children manage to make tolerable by the excitement of their outside contacts. Some of them become delinquent, but most of them blunder through. After a few stormy years they break away from home and most of them become fairly successful adults, but not as successful as they would have been had they been free from the morbid oddities of thinking and acting that they learned at, or across, their parent's knee.

In contrast to the stupidity of parents who wait for their

children to violate the rules, there is the common-sense method of organizing the child for appropriate behavior in advance of the occasion that calls for it. A good driver is one who keeps his eye a hundred yards down the highway and who knows in plenty of time what cross roads and chuck holes lie ahead. Furthermore, a good driver does not become angry at events over which he has no control. He does not mumble imprecations at the slow-moving truck he is following up a mountain road. In like manner a good parent accepts the inevitable shortcomings of children and bides his time. He never lets himself become indignant. He nurses and develops his child's tolerance for suggestion by making good behavior easy. He looks ahead and with the lightest possible touch guides his child in planning for the situations that are about to occur. He combines what the child wants with what he himself wants when this is possible. In an emergency when this is not possible he relies upon his child's liking for him and demands and receives blind obedience.

Many a parent will admit that he is ill-natured toward his children. All will agree that this does nothing but harm. Parental bad manners become compulsive in the irritable father or mother, just as excessive drinking becomes compulsive in the alcoholic. A determination not to scold or not to take a drink is forgotten in the social situations that prompt these evil habits. It is not easy to reform, but it can be done. Fortunately, the scolder can stop short in the midst of his tirade more readily than the alcoholic can refuse the next highball. Saying the alphabet backwards before continuing is a safe rule. But it is better still for the parent to realize that it is not the child but rather his own incompetence that irritates him. The way out of the difficulty is to play the game with more skill.

There is in every child the tendency to do just what you want him to do, provided this is at all reasonable. You can not always touch off this tendency by issuing orders. Good behavior is hard enough at best and should always be made easy. When you are having the roughest going, it will help if you remember that just beneath the surface there is the good child. Address yourself to him and not to the naughty child you are looking at. Be careful not to become sentimental in your effort to reach the child. Bear in mind that children hate a yearning parent almost as much as they hate a sourpuss. Be interesting.

The tone of voice, the manner, the words you have so often used when your child has been difficult have all become cues for continued opposition to your wishes. This is a matter of simple conditioning. The pleading manner, the hurt-feelings manner, the angry manner have been reserved for those occasions when the child was acting badly; so, unless in the past they succeeded promptly in bringing him to time, they merely reinforce the conduct you are trying to bring to an end and they make being good doubly hard for him. Use the manner that you normally employ when the child is cheerfully doing what you want him to do. Any child, given the first few words, could finish most of his parents' sentences. Whatever is wholly predictable interests nobody. To hold a child's attention you must make what you say somewhat unexpected. The same principle applies in holding the attention of a husband or wife. Stereotyped language gives a child too much warning of what you are about to require of him. The shorter the sentence the better. A slight gesture is often better still, since it does not call for a reply.

If you are an habitually annoyed parent you are slightly afraid of your child. This comes partly from your lack of skill and partly from your sense of guilt. This uneasiness makes impossible the whimsical intimacy that is essential to any proper parent-child relationship. The solution of this difficulty is, of course, to become more competent.

The multitude of skills that contribute to our getting along pleasantly with children and influencing them favorably would defy any attempted listing. Even if we had such a catalogue of parental aptitudes it would serve no useful purpose in pointing the way toward their acquisition. Our basic guide is an understanding of children and the way they learn. But that is beyond the scope of this book. We must rest content to give warning of a few of the major dangers that beset the child's wholesome development and a few of the greater needs that his parents must satisfy.

Among the dangerous mental characteristics that we should try primarily to prevent or to correct is a child's conviction of his own inadequacy. All children fail, but it takes a parent, a foolish teacher, or a thoughtless older brother to make a child a failure. This is done by condemnation, by asking him why he is so naughty, by teasing, by shaming, by arousing guilt and fear within him. Much of this abuse is poured out upon him under the name of discipline or correction. Much of it he receives from older persons who relieve their nervous tensions by being mean to a little fellow who cannot retaliate. Thus are spoiled the qualities of happy confidence and an appetite for the difficult task.

Furtiveness and deceit are to be regarded as normal among the children of faultfinding and moralizing parents. They are forms of adjustment to a morbid household. The most honest children are found in homes where the words "lying" and "stealing" have never been heard. Parents who always suspect the worst are forever laying traps to catch their children in some violation of the rules. They ask leading questions that invite falsification. These are the parents who assure their children that if they tell the truth they will not be spanked. They are ignorant of the incontrovertible fact that any child would rather be spanked than be exposed to the gloom of parental disfavor. In a reasonably short time the children in self-defense lose their level-eyed sincerity.

A child's affection is not purchased with parental love alone. A child may hate the parent who adores him. The parents who are loved are the lovable ones. They are gay, courteous, and amusing. They do not bore, anger, or frustrate their children. Like adults, children love the persons they serve, not just those who serve them. To be sure, such service must be fruitful. It must be spontaneous. It is not made up of drudgery and chores. In large measure it is joint service inspired by frequent family conspiracies toward acts of generosity and little kindly surprises.

Congeniality between two persons rests upon mutual plans and interests and skills. Common purposes are necessary for the growth of friendship. You dislike those with whom you are at cross-purposes. If you want to trim the Christmas tree, build a house, take a trip, play bridge, go to the movies, or keep a canary, and if your companion is opposed to doing these things, there is not much light in your eye or warmth in your heart toward him. You should not by any means share all of your companion's plans, but you should share enough of them to permit a good deal of cooperative enthusiasm. You should harbor resentment toward none of his undertakings.

We like the people who spontaneously do what we do and think what we think and enjoy what we enjoy. This is as true of children as it is of adults. We are ill at ease with foreigners until we discover in them ways of feeling and acting that are similar to our own. There is no danger that we shall ever find friends who are so much like us as to be dull and uninteresting—unless the traits we ourselves have are unpleasant. Such a duplicate unpleasantness once in a while occurs in the case of identical twins. When a mother says that her child is too much like her to allow the two of them to get along without quarreling, the similarity is never found among desirable qualities.

The area in which parent and child may plan together is larger than most persons suppose. It covers almost every aspect of family life. Sometimes the objectives toward which mutual effort is directed are the child's own creation, as when you sew up the rip in Junior's football jersey. Sometimes what you are both working for is chiefly your concern, as when you let the child pass sandwiches to your tea guests. As a child grows older you and he may contribute somewhat more equally to the carrying out of your joint intentions, but the important thing is that the child should lend a willing hand to the extent of his growing capacity in as many household undertakings as possible. This should not be accomplished by force except to overcome an initial resistance that bars the way to a spontaneous enjoyment of some reciprocal activity.

If we construct a rat maze with blind alleys branching off from the route that leads to the food, the rats that run the maze will gradually learn the true path by making mistakes. But if, on the other hand, we force them to run the true path by blocking off the blind alleys, then, although they develop great speed in traveling from entrance to food box, they are quite bewildered when the doors to the blind alleys are later opened. They have not learned the maze. The same is true with children. If their parents have done their thinking for

dictable adventure. As we grow older and come, through conditioning, to anticipate the results of most of our actions, our emotional tone subsides, and in order to afford ourselves a thrill we create artificial uncertainties in the form of games of chance and dangerous sports. We are driven to difficult undertakings because the normal way of life is too predictable to be interesting. Dull routine demands no sudden and vigorous reactions. It does not stir the emotions.

Children's bodies are built for excitement. If they can not obtain it by challenging the unanticipated results of headlong action or by engaging in imaginative play, they are usually restless or bored. When parents restrict their activity and admonish them to quiet down, the children seek adventure in being bad. They thus keep their environment wrought up and maintain their tensions by goading their parents to the verge of retaliation. This is the child's commonest household game of chance. He plays with his parents as a naughty little boy teases the cat. The closer he can come to the edge of disaster the greater is his emotional reward. He here faces the unpredictable, which is the essence of play. He does not know quite when his parent will take direct action. Many a bored preschool child engages with his mother in this sport every day of his life. As long as he has nothing better to do, and his mother cooperates, the game goes on.

ested in your plans as though he had made them himself? Do you remember that it is no worse for you to have him underfoot than it is for him to have you overhead? Have you come to realize that when he is cranky he is not reacting to the situation of the moment but usually to some disappointment that happened ten minutes ago? Are you substituting milk and cookies for spanking? Do you get from Junior an occasional look of understanding approval? Have you got over being slightly afraid of Junior when a sudden showdown is necessary? Is your manner attractively convincing? If a tire were to go flat would you waste time by showing annoyance, or would you just change it? Are you frequently overwhelmed by the conviction that this is the best of all possible worlds? It isn't, of course, but that's not the point.

Having passed the test with a high score, you are now in a position to help Junior on his way to a dry bed. You might even be almost as good at this as though you were not his parent; if so, you are a rare and exceptional person.

It is quite possible to cure the habit of bed-wetting without recourse to a mechanical training aid. The essential thing is for the bed-wetter to take the initiative in planning whatever routine is used. The more completely he can be convinced that the plan is his own, the more likely any plan is to succeed.

In the case of older children the parents should take no responsibility at all, or at least seem to take none, for the organization of the enterprise. The parents' role here is to stand back and to show gratified astonishment that they have so ingenious and clever a child. The plan, whatever it is, is best hatched in the office of the physician or psychologist in conference with the child and in the absence of the parents. The parents should preferably be informed of what is to take place only through the child. This can not be done in dealing with very small children, but the principle involved must be kept in mind and acted upon insofar as possible.

When outside cooperation in plan-hatching can not be secured, it is important that one member of the family conspire with the child while the others serve as a cooperative and appreciative audience. The child, however, must feel that he is taking the lead in putting the plan into operation. It is here that your preparatory morale-building begins to bear fruit. When the child interestedly begins to give orders rather than take orders in carrying out the enterprise, the ultimate success is pretty well assured.

The simple routine of being "taken up" at night is what has taught dry habits to most of the inhabitants of this globe. Most discouraged parents will tell you it does not work. But this is chiefly for the reason that they do not thoroughly waken the child. And getting him wide awake is not an easy matter when the child for years has been visiting the bathroom in a drowsy condition. The "best" trick to rid him of all sleepiness is the one that *you* find to work best in his case. With children under four, a few minutes of hilarious romping before going to the toilet is usually best. This is sometimes hard on a middle-aged parent at three o'clock in the morning, but he will get used to it. A cheap toy can be so wrapped and tied that by the time the child has it open he is well back in the waking world. This small surprise miraculously awaits the child's arival each time in the bathroom and, skillfully employed, may serve to make him rise eagerly when spoken to. Reserving this occasion for brushing the teeth is desirable. A cold washcloth on the face or even a tepid bath may be required to arouse the child. Fruit juice or a snack of any kind may be given, provided that the child enjoys it and looks forward to it. In any case, he must be very wide awake indeed before using the toilet.

The trip from bed to bathroom must be made unaided. Under no circumstances should he be carried if he is old enough to walk. Bright lights are better than dim ones, and they should be turned on just as he is being wakened. If he shows initial resistance or annoyance upon being disturbed he should be given no time to practice such an attitude. On the other hand, he must not be made angry by rough handling. This is where your newly acquired influence and your ability to elicit a happy response from Junior is to be put to use.

The old alarm-clock method usually fails because the child learns to disregard the bell and to sleep through the disturbance. Properly used, however, it may be made highly effective for an older child who is wholeheartedly in sympathy with

training. The primary purpose of all this is to develop the child's ability to get up and turn off the alarm before it rings, so that his wakening becomes independent of the alarm clock.

When a child is set to beat the alarm clock to the draw, he is almost certain to rise instantly when the alarm clock beats him and rings before he has turned it off. He will win only part of the time at best, but if he occasionally wakens before the bell rings he will have made a long stride toward bladder control. Whenever he wakens for any reason after as much as an hour's sleep, he should first set the alarm for a later hour and then go to the toilet. When he has taught himself to rise without the help of his parent or of an external signal he is just about cured. But you will never get him to this point unless throughout his waking hours you have let him feel the thrill of unsupervised success and unless you have stopped deflating his enthusiasms by useless condemnation.

Bed-wetting children visit the toilet on the average a little oftener during the day than do dry children. Although there are individual differences here, there is in general less tolerance for daytime bladder pressure among the enuretics. This makes it reasonable to suppose that if these children are encouraged to visit the toilet less often by day and so to develop a greater tolerance for bladder pressure, this increased tolerance may carry over to their sleeping state. We have no experimental evidence to prove that this happens, but in the writer's clinical practice these children are advised not to go to the toilet every time they think of it but rather to put it off for a while. When the child can be induced to comply quite willingly and without parental nagging, the subsequent improvement in night-time control has sometimes been remarkable. Probably waking practice in inhibiting the urgent tendency bears fruit when the urgency occurs during sleep.

Whether or not the bed-wetter is an unusually sound sleeper, it is important that he should get long hours of restful sleep. Any sleep shortage makes bed-wetting more likely to occur. If the success of the method of periodic arousal, or of mechanical training aids, is very evidently prevented by the child's stuporous sleep, the temporary use of benzedrine or caffeine, when prescribed by the examining physician, is sometimes justified. It is justified, however, only as a means of putting the child into a more favorable physiological state for training. Once the child begins to respond to the signal for wakening, such drugs should be discontinued.

In the case of the younger child who must be wakened by his parents rather than by an alarm clock, a similar method of sensitizing him to the arousing stimulus must be used. His interest and cooperation must be worked up to such a pitch that he will waken and rise immediately when spoken to or touched. This ability to waken quickly and completely is a habit that is not very difficult to acquire once its importance is recognized. In a reasonably short time bed-wetting will usually disappear if the conditions outlined here have been met. If you have made your child happy, untroubled, and cooperative, if he has had a hand in planning his own training, if he has become properly sensitized to the signal used for his periodic arousal, and if he has succeeded occasionally in anticipating the signal by wakening of his own accord and going to the toilet, then he is well on his way to a complete cure. But what if all this hasn't happened? Should we now resort to mechanical training aids?

In a way it is a pity that there are available these mechanical devices that arouse the child when he begins to urinate. Their availability is all too likely to make a parent feel that he has something to fall back upon in case of failure. Their use does not guarantee success, because they constitute only one factor among many that contribute to bladder control. But where a favorable parent-child relationship exists they are a godsend in difficult cases.

The Mowrer apparatus may readily be constructed from Mowrer's description. The twisted rubber strip fastened by a rubber band caught around two soluble tablets is the simplest of all the devices, and may be constructed by anyone. Most fathers have sufficient mechanical resourcefulness to set up and service any of this apparatus. The training aid must not be allowed to fail to operate. If the child urinates in his sleep while using a training aid, and if by reason of improper adjustment the bell does not ring, or the stream of air or water is not released, or the twisted rubber does not unwind, there is a distinct setback in training. The child's confidence is shaken, and when next time the apparatus does work it is less likely to arouse the sleeping child.

A great advantage that results from the proper use of a training aid is that even though he has an accident the child does not continue to lie in a wet bed. To continue to sleep in a puddle after the bed is wet, or to roll over to a dry spot instead of rising and changing the sheets, makes the child indifferent to the very situation about which he should feel immediate concern. The only way in which a child may become intolerant of a wet bed is to get out of such a bed as quickly as possible.

A FURTHER AND MORE TECHNICAL DISCUSSION

1. THE MECHANISM OF MICTURITION

The two small ducts or tubes that lead from the kidneys to the bladder are called the ureters, and the tube through which the bladder is emptied is called the urethra. The ureters pass the urine along by wave-like contractions of the vessel wall. The mouth of each ureter, where it enters the bladder, serves as a valve to prevent a backflow of urine into the ureter when bladder pressure increases. Surrounding the bladder are bands of muscle whose contraction squeezes the bladder and increases bladder pressure. The degree of pressure also depends upon the amount of accumulated urine that the bladder contains.

Urine is retained in the bladder by two ring-shaped muscles which encircle the urethra and the neck of the bladder, and whose contraction keeps the bladder outlet closed. Such ring-shaped muscles are called sphincter muscles. Urination takes place through the relaxation of the sphincter muscles and through the contraction of the muscle that compresses the bladder.

Muscles do not contract unless they receive nervous impulses, and some muscles do not normally relax unless they receive nervous impulses. These impulses are set going by the stimulation of sense organs that are located at the starting point of the chain of nerve elements that leads to the muscle.

The train of events that results in micturition is as follows. Urine gradually accumulates in the bladder until sufficient pressure is exerted upon sense organs situated in the bladder wall to start nervous impulses on their way along elaborate nerve pathways which lead back to the muscle that surrounds and squeezes the bladder. This causes the muscle to contract abruptly. The further increase in pressure so produced starts impulses along other pathways that lead to the internal ring of muscle at the neck of the bladder. This muscle, which is the first barrier, has been holding the urine back. It relaxes when the impulses reach it and allows urine to pass into the first third of the urethra. The second barrier, the external sphincter of the urethra, also has some tendency to relax in response to bladder pressure, but it still holds until the pressure stimulation of the urine escaping through the first barrier starts impulses on their way that add to its relaxation. The presence of urine in the urethra also causes further contraction of the muscle that compresses the bladder. With both sphincters relaxed there is nothing to obstruct the flow of urine, and voiding follows (4).

The infant bladder fills and empties rhythmically and automatically through the functioning of this basic neural mechanism. All the stimuli that bring about this periodic voiding are furnished within the baby's own body. Sights and sounds and skin contact furnished by objects that surround the baby have at first little if any influence in hastening or in delaying the moment when the next voiding will occur. But some of the nerve pathways that are employed in this fundamental regulatory mechanism have other nerve connections that reach well up into the baby's brain. This offers opportunity for the formation, through learning, of further connections which gradually come to link the eyes and ears and the sense organs in the skin and muscles and joints to the basic mechanism that responds to bladder pressure.

Bladder pressure is what in psychological terminology is called an unconditioned stimulus, and the circumstances under which the response of voiding frequently occurs are called conditioning stimuli, or conditioners. The presence of conditioners, that is, the customary accompaniments of a response, comes to increase the effectiveness of an unconditioned stimulus when it is not quite strong enough to produce the response all by itself. In this instance, a low degree of bladder pressure which alone would not produce voiding will cause voiding when accompanied by the sights and sounds and by the stimuli to the skin and muscle sense organs that occurred during voiding on previous occasions. The successful toilet training we give the baby is based upon this principle. The firmly fixed habit of bed-wetting also illustrates it.

Thus the presence of circumstances under which an act is usually performed helps to call out the act. It is also true that the absence of these circmstances discourages the act. If a child has frequently gone to sleep holding his toy animal, not only does the toy promote sleep but sleep is positively interfered with if the toy is withheld. A baby who is accustomed to a knitted cover on his bottle is likely to take his feeding reluctantly if the cover is not used. Similarly, a child who regularly urinates while seated at the toilet progressively builds up a higher and higher threshold of the voiding response to bladder pressure in all other situations. But just as he can adapt himself to sleeping without his toy or nursing without the bottle cover if he is frequently disregarded until he gets sleepy enough or hungry enough, so he can adapt himself to urinating anywhere if bladder pressure is allowed to reach the voiding point before he is taken to the toilet. In this way a child already trained to dry habits may relapse. This sometimes happens after a few occasions when no toilet is available, or when excitement or a hearty laugh precipitates an accident, or when illness so modifies his muscle tone that he unexpectedly wets his clothing. But this in itself is not much of a setback to his dry habit unless the behavior of his outraged parents frightens him. Handled in an intelligent way, he is soon back on a dry schedule.

For some time after birth an infant shows relatively little learning. For this reason it is useless at first to attempt his toilet training. Only after three or four months of age is toilet training usually effective. Probably the brain of the newborn is not sufficiently mature to make conditioned bladder responses possible. It may, on the other hand, be incorrect to assume that this ability to learn waits upon further growth in the brain following birth. Possibly bladder conditioning requires as its basis certain habits of response to the external world that take some time to be acquired. In any case, it is pretty well established that attempted training during the first three or four months is of little avail in most infants. McGraw (18) gave early training to two babies, reserving their twin brothers as controls, and reports that the results were probably not affected by the early weeks of training. The education of the control twins was begun at a much later date, yet their learning was approximately as satisfactory. The lessened frequency of micturition as age increases is not due wholly to the parents' method of education; it is attributable in part to anatomical and neurological maturation.

The external sphincter of the urethra is striated muscle, and its relaxation in response to urethral dilation is usually accounted for in terms of "central inhibition." In the older child the external sphincter may be contracted at will in order to cut off the flow of urine. Such contraction, however, is usually associated with the contraction of other perineal muscles. As these respond to local skin stimulation there are many opportunities for conditioning the sphincter contraction. If the baby starts to micturate while being changed, his diaper may be forcibly applied and he may be hurried to the toilet. The stimulation so furnished may later lead to the deliberate retention of urine in like situations. Children themselves, when taken short on their way to the toilet, often

would use a little more will power if he could keep dry. The problem demands that the old familiar methods which have failed be abandoned, regardless of the fact that it seems as though they ought to work. If they do not work they are far worse than useless, for they have probably become conditioners for voiding.

The amount of urine delivered by the kidneys in a given time depends upon many processes within the body. These vary with the individual, with the kind and the amount of solids and fluids that are eaten and drunk, with the temperature and humidity of the surrounding air, with the clothing or bedding that is used to keep the body warm, with muscular exercise, and with emotional states. The volume of urine passing through the bladder, together with the loss of moisture and humidity of the sourrounding air, with the clothing course in the end proportional to the volume of water that enters the stomach. Under varying conditions, however, the body tissues and the blood tend to store or to release water. The more rapidly the bladder fills, the more responsive the neural mechanism is to bladder pressure and the greater is the feeling of urgency. When the bladder fills slowly, a considerably greater degree of pressure may be tolerated.

A state of alarm may be accompanied by a decreased output of urine by the kidneys. Rydin and Verney (29) demonstrated that dogs under emotional stress produce less urine than do dogs that are not excited. The agent acting on the kidneys is not adrenalin, and the decreased water secretion may depend upon pituitary control. Karady, Browne, and Selye (16) found that the "alarm reaction" in rats is accompanied by a shift of water from the blood into the tissues, with a decreased urine output. But a state of dread, although it lessens the output of urine, is also accompanied by a tendency toward bladder spasm and sphincter release that is somewhat independent of bladder volume. Hall (15) has shown that urination among rats occurs more frequently in strange surroundings that supposedly produce a state of dread. He has used the frequency of this reaction as a measure of emotional disturbance. Involuntary micturition occurs in condemned prisoners and among soldiers while waiting to go into action. Burt (7) reports that among British children who were evacuated from bombed areas there was a marked increase in anxiety states with a corresponding increase in enuresis.

As an adaptation to danger, both the absorption of water by the body tissues and the voiding of urine are appropriate and useful preparation for strenuous action. The animal about to fight or to flee is better off if unencumbered by a full bladder. He is also in need of a greater hemoconcentration in the blood stream as well as of increased water content for muscle chemistry and perspiration. It is therefore not surprising that among the symptoms of excitement and anxiety we find both reduced urine output and enuresis.

2. THE INFLUENCE OF PHYSICAL PATHOLOGY

Serious defects may occasionally be found in the bed-wetter's urinary system or in its nervous control, but most physical pathology does not interfere very much with the establishment of dry habits. A deviation from perfect health may be found in almost every child, but it may have nothing to do with the absence of bladder control.

One of the most complete clinical studies of enuretics ever made is that of Campbell (9) who found pathology of the urinary system in two-thirds of his three hundred and thirty cases, but he believes, nevertheless, that nine out of ten times bed-wetting is a habit condition. Calvin (8) states that most cases can be cured without correcting supposed physical defects. McGuinness (19) is of the opinion that a psychogenic basis exists in most instances. Mohr and Waterhouse (23) point out that even where a physical condition exists which makes urination unusually imperative, the child can still learn to rise and go to the toilet. Regardless of its influence on enuresis, however, any physical pathology that is discovered should be corrected when possible in bed-wetter and dry child alike.

Enuresis has frequently been attributed to an "irritable bladder," but this explanation merely begs the question (3). When abnormal urgency and frequency of urination are present, no light is thrown on the basic mechanism by calling the bladder "irritable," any more than when the mother describes her child as having "weak kidneys." It seems mere speculation to suppose that the receptors in the bladder wall show a lowered sensory threshold.

The association of malnutrition with enuresis is probably slight but positive. Ackerson and Highlander (2) found no difference in body weight between bed-wetters and dry children among their clinic cases, but possibly their control group was not representative. Mohr and Waterhouse (23), working with an institution population, reported that the enuretics were in poorer nutritional condition than the others and of slightly inferior physique. They also had less efficient cardiovascular action as measured by controlled tests. Consequent liability to fatigue may be a factor that favors enuresis.

The frequency of wet beds is somewhat increased among two- and three-year-old children during measles and other common children's diseases. The writer recently saw a nineyear-old girl whose bed-wetting had ceased a year before but was initiated again immediately after she had fractured her leg. A ten-year-old boy who had almost achieved dry habits relapsed completely while wearing a cast for a fractured clavicle. Such effects, however, are but temporary. Campbell (9) found that the incidence of antecedent disease was not significantly higher in his enuretics than in his control group.

Bed-wetting is far more frequent among mental defectives than among normal children. Within the normal group, however, there is very little relationship between degree of intelligence and dry habits. Within the feeble-minded group there is considerable relationship (28), but even low-grade mental defectives show surprising improvement with proper training (30).

3. FAMILIAL TENDENCY

Bed-wetting occurs far more frequently in some families than in others, and it is not unlikely that there is a biological basis for this. Stockwell and Smith (31) report that 63 per cent of their bed-wetting cases had parents with an enuretic history, and 23 per cent had brothers and sisters with such a history. Bakwin (3) thinks that there is evidence that a family grouping of the condition exists. Among Brookfield's cases (6), on the other hand, enuresis in other members of the family was rarely reported. Michaels and Goodman (22) observed that enuresis shows more familial grouping than does left-handedness. The two conditions, enuresis and lefthandedness, were not found to be associated. Calvin (8) finds familial bed-wetting to be common and thinks that heredity plays a role. But quite evidently we can not say with any certainty just how important a role is played by the ways of thinking and acting which characterize families and which for the most part are not biologically determined. Poor housekeeping probably runs in families too, but we would hesitate to ascribe this to an immediate biological factor.

Frary (11) proposes the hypothesis that enuresis is a hereditary trait determined by a single recessive gene substitution. If this were true, a pair of enuretic parents would have none but enuretic children, just as two albino rats have only albino offspring. But unfortunately for Frary's conclusion, one of her necessary assumptions is far too remote from probability to be entertained.¹

4. DEPTH OF SLEEP

Do bed-wetters sleep more soundly than other children? Parents will usually tell you that the bed-wetter sleeps "like a log" and is difficult to arouse. Bakwin (3) believes that depth of sleep is not a cause of enuresis. Partridge's cases

¹ Out of 47 alleged RR parents (groups I and II, Table I), Frary assumes that 2 married RR's, 38 married DR's, and 7 married DD's. The individuals whom the 47 alleged RR's married, unless there was selective mating, would certainly constitute a chance sample of the general population, and there is no reason to suspect that selective mating occurred. The proportion in this random sample that must be assumed in order to make the Mendelian law fit the case is 4% RR, 81% DR, and 15% DD. It is, of course, genetically impossible to obtain from random matings a chance expectation of more than 50% DR individuals in a population. Frary's alleged 81% DR would occur by chance in a population of this size only once in more than 10,000 random samplings. Her proportion of DR is 4.2 S.D. beyond expectation. We may safely conclude that the premise upon which her theoretical findings are based is wrong. Furthermore, if those individuals who married the enuretic parents had not done so but had married among themselves, and if they had been in the RR, DR, DD proportion that was assumed, the first filial generation would have contained only .198 RR, .494 DR, .308 DD. If the single-gene hypothesis for enuresis were true, the only way in which the general population could come to contain more than one-half DR would be for pure wets to tend to fall in love with pure drys or, perish the thought, vice versa. It is a little difficult to see how they could tell one from the other. If the determination of enuresis were to conform to as simple a Mendelian formula as that proposed by Frary we would expect a dimorphism in the distribution of ages at which children achieve dry habits. The absence of any evidence for this further discredits the hypothesis. Ackerson (1) secured histories on 356 children whose bedwetting had ceased at an age later than three years. Among these he found an almost constant decrement of bed-wetters from 3 to 17 years. There was no tendency whatever for this population to divide itself into early-recovery and late-recovery groups. We are forced to conclude that the age of establishing dry habits is a continuous variable.

(28) wet the bed most frequently around ten o'clock in the evening and six o'clock in the morning. Brookfield (6) reported "sounder" sleep in the enuretic group. In his study of the activity of preschool children during sleep Garvey (13) took continuous records through the night and discovered a slight tendency for a child to have been more restless when the bed was found to be dry in the morning than when it was wet. As no record was made of the time of bed-wetting it is impossible to say whether the child wet the bed because he had been quiet or whether he was quiet because he had wet the bed.

Profound sleep does not cause enuresis in a person whose dry habits are well established. Sedatives produce deep slumber and are administered without any loss of bladder control, though this might be attributed to their anesthetic effect upon the sensory mechanism of the bladder. But in this connection it should be remembered that sleep itself has the effect of raising, and not lowering, sensory thresholds. Infants urinate less frequently while sleeping than while awake, and there is some evidence for the opinion that bed-wetting occurs more often when the child is drowsy than when fast asleep. There is a slight increase in enuresis following an evening spent at the movies (28), which may mean that bed-wetting is associated more with disturbed sleep than with deep sleep.

The most important difference between the sleeping habits of wet and dry children is that the bed-wetters have learned to resist being wakened either by a full bladder or by micturition or by the efforts of their parents to arouse them. They have become selectively resistant to these disturbances. This resistance is certainly psychological and probably has little to do with depth of sleep.

A full bladder during sleep may cause either a child or an adult to dream that he is searching for a toilet. With the continent person, the dream search is unsuccessful or the dream situation is not appropriate for voiding so that wetting the bed does not follow. The enuretic child, however, may urinate when in his dream he has found the toilet. These dreams that result in voiding seem to occur more often among occasional bed-wetters than among children who wet the bed almost every night.

5. THE DISTURBING EMOTIONS

Fear has already been mentioned as a cause of enuresis. Sometimes the contributing anxiety is merely a fear of wetting the bed and of the disgrace or punishment that will follow. One of the writer's cases, an eight-year-old who wet the bed occasionally, was brutally burned with a hot poker and threatened with further mutilation by his neurotic mother because of his enuretic habit. Following this the boy wet nightly and finally ran away. He was placed in a foster home and told that it made no difference whether he wet the bed or not. He had three accidents during the first eight nights, after which he established permanent dry habits.

Even though a child is treated tenderly he may still become emotional over his failure to control the bladder if his parents show too great concern. Their lack of confidence in the outcome may throw an overly dependent child into a mild panic. Evans (10) states the point nicely when he says that we may consider enuresis to be an expression of anxiety just as blushing is an expression of embarrassment. Many of the cures attributed to strange remedies may be actually a result of the confidence which both the child and his parents felt in the treatment.

There are, of course, many occasions for fear that do not concern the results of bed-wetting. Fear of the dark or of burglars, fear of school or of some bully who must be

avoided on the way home, or fear resulting from a conviction of sin are all met with in enuresis cases with a frequency that seems significantly greater than that encountered in other children. We might well suspect that such a difference is not a real one, but rather the result of our finding fears where we search for them. The careful work of Mohr and Waterhouse (23), however, lends support to this clinical opinion. Their bed-wetters were found to be less stable emotionally than their control group and to have a greater number of emotional conflicts. The primary fear of bed-wetting and its consequence is, nevertheless, the most effective one. Other fears are more transient because they are not aroused by the nightly occurrence of going to bed. But we must not lose sight of the fact that many bed-wetters are unusually free from anxiety and many continent children are beset with fears. These emotional states do not necessarily produce enuresis. They merely favor it, just as their absence favors but does not insure recovery.

Parental disapproval may in the end establish responses quite different from anxiety. Almost any child will become habituated to nagging. When a response is not effective in removing a disturbing stimulus, some other response is tried. When being sympathetically emotional toward his parent's tirade gets him nowhere, the child frequently substitutes sullenness or indifference for the anxiety he used to feel. One boy, who was obliged to wear his wet pajamas tied around his neck as a means of shaming him into dry habits, was discovered playing baseball with his friends while still wearing this odd neckpiece. The child was evidently being trained to care little about the niceties of personal hygiene. His playmates were mildly sympathetic and regarded the boy's inconvenience as but another example of the adult enigma.

Jealousy is in some fashion associated with enuresis. But

better than its descriptive value. This does not mean, of course, that we should never describe a child as persistently quarrelsome or shy or furtive or aggressive toward the conditions under which the observations were made. But even here the sampling error makes generalization dangerous.

The child's "total personality" can not be said to be the root of his trouble for the very good reason that nobody knows what a child's "total personality" is. Being a bed-wetter is likely to change a child's thinking and behavior, but this occurs indirectly as a result of the more immediate change that his bed-wetting brings about in his environment. His conduct is at least partly the result of the way people treat a bed-wetter; the result of the situations and unsolved problems that bed-wetting presents. It is remarkable that, even with this handicap, his social and emotional responses usually compare not unfavorably with those of other children when he is in situations well removed from the scene of bedwetting.

Parental mismanagement or other unfavorable home conditions may favor enuresis and may also set the stage for the child's engaging in nail-biting, refusal of food, temper tantrums, or smoking behind the barn. Such linkage as exists between wet beds and oddities of behavior hardly calls for an explanation in terms of an indwelling personality. That any one of these reaction tendencies causes another, except insofar as one of them may bring about an environmental situation or an emotional state that invites the other, is a matter of remote speculation.

Montgomery (24) finds no marked relationship between aggressive or submissive behavior and enuresis. Evans (10) believes that there is little correspondence between bed-wetting and personality, even though bed-wetting is frequently accompanied by nervous habits and faults of behavior. Mc-

bed-wetter is treated gives him a sense of guilt and that this is probably responsible for most of the conduct disorders and personality difficulties that so often accompany enuresis. This is further borne out by the fact that children whose wet habits are cured show a general improvement in their social behavior. Being a bed-wetter places a child at such a social disadvantage that we might well expect to find him making a poor adjustment to many circumstances of life.

The probability that other undesirable habits cause enuresis might seem, on a common sense basis, to be rather remote. But sometimes they do operate as a cause. The anxiety attending the violation of mores and tabus, the resentment that follows being penalized for such violation, the loss of regard for the wishes of others that occurs in many chronic delinquents—all these may well contribute to enuresis. A child who is confident of his family's esteem is doubtless less likely to be a bed-wetter than one who is conscious of his family's condemnation.

The third possible relationship between enuresis and other undesirable habits consists in their all being the result of some common cause. We may look for such a common cause within the child or outside the child. The external factors are the easier to describe.

Unreasonable and ill-natured parents may fail all along the line in the training of their children. Thus the same child may as a result suffer from enuresis and from many other faults, just as a child may have bad table manners and use bad grammar, without there being much, if any, causal relationship among the faults. Indeed, any parental shortcoming whatsoever may be reflected by different and independent shortcomings in the child. This is doubtless the partial explanation of the association of bed-wetting with other undesirable traits.

suggestion. These circumstances afford opportunity for masturbation. Anxiety may be aroused in the masturbating child if he is mistakenly told that his behavior is destructive of mind, soul, or body. As this anxiety may conceivably be revived when he visits the toilet it may come to be attached to the stimuli of a full bladder and the act of micturition. If it were to do so, and if anxiety has a diuretic effect, masturbation might play a part in the etiology of enuresis. Indeed, any guilt feeling resulting from masturbation might be a contributing factor. This possibility is suggested by Calvin's observation (8) that an admission of masturbation followed by the overcoming of the habit may result in overcoming the enuretic habit as well.

There is also the possibility that sex excitement has a diuretic action and that masturbation may entail increased bladder pressure. Some plausibility is afforded this hypothesis by the popular belief that normal coitus has a similar effect.

How often bed-wetting is a sign that the child has more than his share of unresolved anxieties in the field of sex is a question we can not answer with certainty. We can at least be sure that there is no scientifically established evidence that most wet children differ from dry children in this respect. Many children have sex anxieties, and if these are looked for among enuretics they will be found. Until a control group is subjected to the same assiduous analysis that the experimental group has received, the case histories are quite unconvincing. Any worry may contribute to bed-wetting in a child who has not yet acquired dry habits, and its alleviation favors a cure. But even if the cure is effected without resolving the anxiety, the child may be in this respect as well off as children in general. This, of course, does not relieve us of the further obligations we owe a child.

Is bed-wetting a safety valve for children who are victims or erotic anxiety? If they are cured of their bed-wetting will their conflicts be aggravated, and may these conflicts drive the children to even less desirable forms of behavior? Many professional persons in whose hands children are placed believe so. But for this belief again there is no scientific evidence. It is a belief that has never been subjected to experimental verification. It is true that if we tie down a child's kicking leg he will kick with the other, or if we lock the front door he may escape through the back door. Such analogies prepare the popular mind for acceptance of the belief that worse things may be substituted for enuresis. The substitution of one form of neurotic behavior for another sometimes occurs. But probably this happens only when each of them is an alternative means of relieving some persistent stimulation or some acute emotional state. We have no reason to think that in the great majority of children bed-wetting relieves anything but bladder pressure.





