IS ESSENTIAL EPILEPSY A LIFE REACTION DISORDER?¹

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The present, perhaps, may be considered a fitting moment and place to state, more or less briefly, some of the newer psychological observations of essential epilepsy, viewed largely as a life-reaction disease or syndrome occurring in particular types of individuals possessed of certain instinctive or inherent defects of character or emotional make-up. We shall discuss (1) the so-called epileptic character and its development; (2) the causes of the epileptic fit; (3) the nature and meaning of the fit itself; (4) the rational deductions in care and treatment of epilepsy drawn from such a viewpoint and study.

For the purposes of this paper, essential epilepsy is meant to embrace that type of the disorder which is exclusive of the so-called organic epilepsies and those suffering from definite physical lesions or disfunctions of the viscera which secondarily induce the disease, thus leaving an apparently sound and healthy individual having epileptic attacks of apparent idiopathic origin. A life-reaction disorder is meant to embrace that type of phenomenon which may be compared to a state of rage or anger as seen in bad-tempered individuals or excessive emotionalism as seen in the hysteric and the like.

From ancient times the essential epileptic has been considered a peculiar type of individual. The salient features of the so-called epileptic personality in its most exquisite and classic evolution are egocentricity, extreme supersensitiveness, marked emotional poverty and rigidity of ideation and mentation. For years this character type has been supposed to develop in direct proportion to the severity and frequency of epileptic seizures upon which it has been assumed to depend more or less directly. Careful analysis has, however, shown that while the most glaring character faults and mental deterioration may be seen in those epileptics with frequent and severe seizures, this is by no means the invariable rule,

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there being many defects of instincts and evidences of severe habit
deterioration in epileptics with but mild seizures. Indeed, many
epileptics may undergo increasing impairment in seizure frequency
and severity independent of sedatives, and yet such individuals
may show by life reactions as well as by psychological tests that
the deterioration is progressive and marked. The reverse of this
statement may also be shown. In consequence we have come to
realize that while the severity and seizure frequency on the one
hand, and instinctive defects and mental deterioration on the
other, may be to some degree coincident, they bear no essential
causal relation. On the contrary both syndromes are the
expressions of a deteriorating process not summated in fits or their
congeners. For several years I have studied a large series of essential
epileptics as to their primary mental endowment before fits occurred.
It was found that in practically all there was nothing wanting
in mental makeup not seen in the frank and veteran epileptic.
The character faults varied, perhaps, in the amount and degree
present in such potential states before seizures, but the character
defects were sufficiently glaring to mark such individuals as patho-
logical personalities portending a possible epilepsy in later life.

The Detailed Development of the Epileptic Character.

Inasmuch as the life reactions of the epileptic character are the
distinguishing factors of the makeup, we may sketch the defects
of maladjustment at the several epochal levels of life stress. At
birth the potential epileptic child frequently has periods of mean-
less crying. This extra-irritability and sensiveness is so
pathological that it rarely fails of detection and record. For
instance, one history states the child "was considered a nervous
and irritable child from the day of birth." A second "fretted
continually at the contact of rough clothing," while a third "was
nervous and persisted in infantile demands long after weaning."
A fourth "cried continuously the first three months," although
nothing physically abnormal could be detected. One infant
nearly went into spasms at the sound of an air-brake. Still another
had to be rocked continuously and slept only during this care. The
next important sequence in such a character is its non-pliability
in being taught nursery ethics—that is, obedience and proper
daily deportment in the home. These behavior defects are usually
independent of purely intellectual and physical ones, and these
infants sit up, creep, talk and walk at the usual ages. Indeed, in
not a few the physical and the intellectual development seem
accelerated and certainly are hyperactive. Extreme lability of
mood is a frequent factor. One moment contented and the next
irritable beyond power of appeasement is often noted. The con-
secutiveness of purpose in play and capacity to be amused is
short, requiring the constant attention of the parent and a variety
of interest appeal. Of one such epileptic it is stated that "he
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seems never to have developed out of his infantile ways; his rigid attitude of mind as a child is still in evidence in his adult life, and now he has fits added.” Tantrum episodes even under the mildest discipline are most common in these difficult children. Their mal-adaptive defects are soon shown in their association with other children. They demand the play to be arranged to suit them; a game must be played a certain way; it must be continued or stopped as they direct. Their likes and dislikes are extreme. In the school under an impartial discipline these potential epileptics show the most marked traits. The mood is inconstant, the interest and attention continually vary, and hence their more purely intellectual processes often show wide dissimilarities in evolution. Extremely brilliant in some subjects and quite ignorant in others is the general rule. Because of their extreme nervousness and inability to conform to school routine, many children fail physically and mentally and cannot take on the normal school training. Some are privately tutored; others are exempted from school discipline and routine except for short periods. Such scholars often appear pale and haggard, the pupils of the eyes are dilated, and they grow lethargic and sullen or sit day-dreaming and yawn, although not really sleepy. They grow intolerant of the school and often rebel at its confining and exacting demands. Thus in infancy and early childhood the instinctive defect of the ego fails of proper sublimation or extraversion; the adjustment to the social and physical environment is incomplete and unsatisfying, and, thrown back upon itself, in consequence there is a reinflation of self-importance and sensitivity. Childhood, therefore, is a fruitful period for new and unbearable stresses, and sequential epileptic attacks often occur in one predisposed. The next stressful period is at puberty; here the dissolution of the oftentimes irksome home ties may release some from the galling exactions of home discipline, but most frequently, as in the departure for school, with its exactions in deportment, we find the puberty adjustment to work and social demands increasingly onerous. The potential epileptic is not willing to take on a proper attitude of apprenticeship. He has the innate instability of the constitutional inferior, but the good-natured indifference of the latter is not his attitude; his feelings are easily hurt, he has ill-defined paranoid persecutions which cause him frequently to react with violence, insouciance and hatred. He has attacks of rages, sullen moods and dissatisfied acquiescence in plans and undertakings. The lack of good fellowship renders him incapable of cooperative teamwork. The potential epileptic admires cooperation and the doing of big things in the abstract, but the requirements of interdependence and subordination to the main purpose galls and irritates him beyond endurance. He often develops fugues and tries a number of precarious jobs, often interspersed with excesses of self-indulgence. The potential epileptic during early adolescence
begins already to present an odd mixture of primary defects of instincts plus a beginning deterioration of the higher capabilities of social adjustments known as habit deterioration. In part the latter is protective—that is, under the extreme stresses of this period he may ease off the stress by lowering or evading the exactions of precise behavior and deportment. Thus instead of presenting fits for a time he may take on various dissipations, alcohol, sexual excesses, wanderlust, gambling and licentious practices. The explosive and impulsive character, the hatred and bitterness of the manner in which the acts are perpetrated, or underneath the seeming callous indifference and total lack of feeling with which the potential epileptic perpetrates these social delinquencies, is revealed the crudity and deep-rooted sadistic impulse of the epileptic character. With no real or intimate friends the potential epileptic holds himself aloof from the demands of the common sacrifice of self and the mutual dependence of social custom. He is a free lance, able and usually anxious to work his own will upon the world. If gifted with extraordinary intellectual endowments he may succeed for a time and make satisfactory progress toward his goal, but just short of it his egotism and ambition are often fired to new and impossible ends; when the whole scheme seems to him within final consummation some small trick of fortune adds the last burden of stress upon his mental and physical health and the individual breaks into frank manifestations of his disorder.

Freed in greater part from the trammels of social concern and demand, the intellectual efforts of the potential epileptic work with less stress than the normal, but in the final and more advanced consummation of his task the social customs of the family, friends and society itself fail to add their small but modifying influence as a directing force to the effort. In consequence new and unforeseen hindrances are added which in turn reduce the mental and physical invulnerability to the minimum, and at such defective periods some physical stress which at a more favorable time would be quite negligible appears as the precipitator of the frank disorder. Thus one learns to discount the common precipitating cause of the epileptic attack; such obvious studies are but surface ploughing of the etiological field in epilepsy. One is apt to think that inasmuch as epilepsy is essentially a disease of early life the great majority are unmarried because the state in itself bars marriage, but in the vast majority the reason is by no means so casual. It is really because the epileptic is rarely equipped in essential character makeup for marriage. Emotionally and sexually he rarely develops beyond the level of puberty and fails in capacity to attain adult love. Naturally this is to be expected in that the latter demands self-subordination and sacrifice, and above all a tenderness of feeling which is conspicuously lacking in the potential epileptic. In view of the foregoing it is evident that marriage increases demands
socially as well as economically and makes not a few potentials break out in attacks. At the threshold of life the vast majority of potential epileptics break before or just at this period, which is the point of maximum stress. Almost all potential epileptics long before their disorder becomes at all acutely manifest, show increasing slowness and a diminished capacity for sustained employment. They show extra fatigue and diminished interest—a partly protective mechanism. A tenacious, consistent, all-around emotional development in a life-work seems impossible in the vast majority. They work fairly well for a time, with plenty of emotional appeal, lavish praise and constant change—all essentially infantile traits of character—but in the end fail to do a thoroughly competent life-work.

The Nature and Meaning of the Convulsion. The muscular convulsion may be explained hypothetically in two ways, or a combination of the two explanations may be desirable. We know the convulsive part of the fit in its severer and cruder aspects is comparable to the impulsive movements of the infant. The impulsive fetal movements begin about the twelfth week of gestation, hence the brain cannot be involved per se in their genesis; further, it is known that brainless embryos possess impulses. There is a short period just before birth in which the amniotic fluid and the uterine wall greatly inhibit the free play of these impulsive movements, but they begin again with renewed activity in the newly born and are slowly inhibited by voluntary control at the end of the nursing period. We do not know just how the impulsive movements are incited further than to surmise that, being of the first, simplest and ontogenetic type of activities of the developing organism, their inciter is from motor centers of the lower order. In these latter structures are stored up a certain quantity of potential energy which is transformed into actual energy by the blood and lymph stream. With the increasing tissue growth and tension engendered thereby this energy finds its outlet in the random movements of the fetus and the infant, and their exaggerated distorted presence is seen in the grand mal convolution of epileptics. Time prevents us from outlining more in detail the essential distinguishing characteristics of the impulsive from the instinctive, reflex and conscious or ideational movements of the infant; this has been done most carefully by Preyer and later correlated into a recent study by Canestrini. Suffice it to say the newer studies on the meaning of the convulsive part of the epileptic fit make careful analysis of all the impulsive movements of the nursing doubly necessary. It will then be found desirable to note their exact relationship in reference to the psychosexual development and its defects as shown in the infantilism of the epileptic.

As might be expected the number of the impulsive movements is not great. They may be schematized as those of outstretching
and bending the arms and legs in the newly born. The movements are sometimes so quick as to resemble the cloni of a fit. They may be slow, then fast and finally end in cloni. Even in healthy infants they may be so slow as to resemble the tetanoid spasm of a beginning focal seizure. Preyer speaks of the muscles involved in the impulsive acts as possessing such a slow, crawling movement that the acts present a striking resemblance to the extension and flexion of the limbs of animals waking from their winter sleep. Such animals, like sleeping children, seen even in the first half of the second year make genuine fetal movements which often look as though they were directed against some invisible resistance. This all suggests many of the striking impressions one gains in observing the convulsions of epileptics. Convulsive motions in the infantile impulsions are, however, not generally so frequent in sleep as slow contractions. The latter are frequently attended by spreading and bending of the fingers which in turn become the rarer toward the end of the second year in all children of sound nervous systems. All these impulsive movements, in the hands especially, are asymmetrical in outline.

What are some of the depressors and incitors of these impulsive movements? Deep, profound and quiet sleep reduces them to the minimum. Satiation by food greatly curtails them. On the other hand a duplication of the intra-uteral state by the use of the warm bath encourages them. The movements are then usually slow and rather rhythmic and graceful. One may even see in them the beginning of an expression of pleasure. The face may join in the picture of contentment with slow asymmetric contortions, which semblance has an odd mixture of pleasure with more than a hint of displeasure. The greater part of the impulsions, however, are purposeless, senseless and asymmetric and are found over the entire body from the first day of birth. Writhing and twisting of the body are also frequent accompaniments to the movements of the face and extremities. Just as the infant sinks into deep sleep these impulsive movements slow down and the body usually comes to a state of rest in the fetal position. The fetal posture in the legs is kept up longer in advancing child life than that of the head and upper extremities. Many writers have called attention to the fact that no one could consciously duplicate these acts. Then, too, one is strikingly impressed that the infant and the epileptic alike are little fatigued by these most intense and persistent impulsions, which speaks strongly for the unconscious motivation in both their activities. Probably in both subjects the fund of reserve energy being so limited in scope is greater than that of the normal adult as ordinarily expressed in his daily activities. Biologically speaking we know that the essential vital energy of an individual is probably at its maximum at birth.

We are justified in considering the essential nucleus of the epi-
leptic fit an infantile unconscious striving of displeasure-pleasure pursuit ending in the final goal of a return to infancy, attended by a loss of consciousness and a convulsion; that the convulsion is made up of and flows out of the general striving of the fetal and infantile tissues as expressed through the lower spinal centers in inducing simple and crude combinations of impulsive movements; that a study of the degree of development of unconscious infantile strivings in the emotional instincts, the desire for an infantile state of omniscience, are paralleled by the kind and character of impulsive movements found in this infantile period of neuromuscular development. Therefore the two main settings in the epileptic fit, unconsciousness and convulsion, are psychical and physical correlates; lastly, that epilepsy in its essential pathogenesis is an error or arrest in this fundamental elaboration or development of the emotional life.

Having schematized the dynamic mechanism of the epileptic fit, we may note that the essential pathogenesis of the disorder as a whole is still to be attacked. Whether the latter rests upon an inheritance of certain psychic traits alone or whether there are certain somatic structural anomalies which do not permit proper psychosexual development into normal adult life one cannot say. I believe such studies, however, narrow the gap between such causes and their psychophysical expression in epilepsy; and finally, such observations must be of greatest aid in classifying the recoverable epileptics from the irrecoverable ones. It also points the way by which we may advance our therapeutics of the disease along the broadest biological lines of educational and moral treatment. In this connection one may note that MacCurdy has tentatively formulated the idea that the sudden loss of consciousness in epileptics liberates a muscular anarchy or "clotted mass of movement" of many different lower levels or physiologically controlled centers in the brain and spinal cord, and that the convulsive part of the fit is a released neuromuscular mechanism or series of mechanisms entirely secondary to the loss of consciousness, the main defect of the epileptic state. He holds the same fundamental postulate as to the psychological meaning of the epileptic fit as we have formulated it.

The Psychological Causes of the Loss of Consciousness. Given the inherent defect of makeup just detailed, it is easy to comprehend how all forms of undue physical and mental stress may operate deleteriously upon the epileptic. The gradations of epileptic reactions vary from day-dreaming, lethargies, petulence, sullenness and outbursts of impatience and temper beyond the casual, until there succeeds a series of petit mal attacks or a severe grand mal, when the lowering skies in the epileptic's life are dispelled for a time until the stresses again accumulate to an explosive level. So long as normal consciousness is maintained the stress
may work its evil consequence in ways well known to all. The epileptic reaction from its mildest to its severest manifestation is really a protection, for it obliterates reality and reduces the subject to the lowest level of organic response—that of a comatose state. Hence the fit is really a protective mechanism, psychologically considered at least. It withdraws or reduces the subject's attachment and adjustments to reality. It dispels an intolerable demand and the epileptic retreats to a state of harmony and peace. In the retreat after incomplete attacks we frequently encounter unconscious strivings and conflicts that have baffled the subject. So exogenous causes, physical and mental in character, slight as they may seem to be, precipitate a conflict which springs the fit-gun, and a series of conflicts of different levels in the unconscious are exposed until after the severe grand mal attack the subject is reduced to the lowest level, comparable to earliest infantile life. When this hypothesis was enunciated a few years ago it was as yet uncorroborated by exact data, but since that time innumerable studies bearing out every contention of the mechanism have been deduced. Thus we find in the mild and transitory deliria of the automatic phase after petit mal attacks the subject may say or do certain things which may be pieced together and minutely analyzed. Like the mental content in manic states or drug and fever deliria these spontaneous productions have to do with the conflicts of every-day life. Then appear the successive deeper levels of emotional strivings and conflicts. For instance, at first the epileptic attempts to rid himself of an onerous task or unpleasant companions; sexual strivings are uncovered and in the deepest level he has made a retreat to the home, is in the cradle or the mother's arms, etc.

**Therapeutic Deductions.** Anyone following this therapeutic procedure should bear in mind that epilepsy from its very nature is a deteriorating disorder physically and mentally, and if it be allowed to progress it steadily lowers the capacity of the individual to make new and difficult adaptations. Hence any treatment which is based upon widening the plan of living is in itself bound to be very stressful. At first one cannot put this extra strain upon the epileptic without entailing more attacks than before. Frequently the plan of analysis given here must be undertaken for short periods only (days or weeks), and then the patient should be allowed to rest in his newly acquired position until he thoroughly accustoms himself to it, when more advanced work may be again undertaken. If the same content in the automatic state repeatedly returns, one must conclude that the special conflict about which the desire in the content groups itself is so basic that mere analysis will not set it free. Then a practical system for eliminating this defect must be instituted. Sooner or later one finds that simple analytical talks are the supplemental guides to more definite methods of training out the personality defect. The susceptibility to meet
this reéducation will give a just estimate of the prognosis in the individual case. It has also been found that coincident with a gradual disappearance of epileptic reactions, as shown in the fits, _per se_, there must be a corresponding increase in capacity for work and other spontaneous living interests. Usually these clinical evidences of betterment are heralded by a shortening in the reaction time and a lessening of perseveration. The mere cessation of attacks, especially under sedatives, without corresponding improvement in the psychological tests, is an indication that the underlying deteriorating disorder has not as yet been favorably modified and that the epilepsy may in course of time be expected to break out again after a temporary arrest.

In conclusion, one may say that a psychological study of the mental content in epileptics, both conscious and unconscious, demonstrates: (1) the depth of unconscious regression; (2) the special types of conflict which the epileptic has and the way he tries to solve them; (3) the specific type of primary defect in his endowment. Its therapeutic value in addition is (4) to furnish a specific point of analytical attack by simple explanatory talks; and (5) to show more definitely the type of special education which should be adopted for each individual patient.

REFERENCES.