reference Ziehen gives on the production of echolalia is to Meschede "Ueber Echolalie und Phrenolepsie," *Allgem. Zeitschr. f. Psych.*, liii, 1897, pp. 443-454. According to Meschede, Krafft-Ebing's notion holds good for many cases of dementia, but not for those which exhibit the most typical echolalia. "The repetition is brought about, not by removal of inhibitory influences, but really by active intervention of extraneous motives, by hallucinatory and psychomotor (psychokinetic) spasmodic or automatic impulses to movement: it is a *phrenoleptic* phenomenon rather than a symptom of defect." In support of this highly subjective and non-scientific interpretation, Meschede describes a case. The notes betray the patient's inability to recall names for persons and objects seen, and possibly other aphasic defects; but on these points Meschede makes no remark. He says the echolalia is effected without the intercurrence of conscious will, and even compulsorily in spite of and contrary to the will. Kraepelin speaks of increased flexibility of the will, but I cannot determine whether he supposes the will itself is induced to effect the echolalia, or whether something else effects it while the will is asleep. Ziehen avoids the term "will," but nevertheless inclines to similar modes of thought. He tells us that echolalia is a compulsive act, the outcome of a compulsive idea. But he leaves us no wiser than we were before, for he does not show why *this* particular idea becomes compulsive rather than some other idea. For the solution of this problem psychology is less helpful than ordinary clinical observation. All we know of echolalia has been learned by regarding it in a purely objective way from the standpoint of natural science, by observing what other speech symptoms it is associated with, or by correlating it with other phenomena of its own class. And as this is the only way in which the facts can be ascertained, so the only useful way in which they can be interpreted is in accordance with any principles found applicable generally to such phenomena *objectively* regarded—such principles, for example, as Dr. Hughlings Jackson has shown us. In this way we can preserve a consistently natural-scientific point of view. We can study the patient's movements, of whatever sort; but when we endeavour to look behind them, to a "will" or an "idea," in the manner proposed by some authors, I fear we are apt to see nothing but our own image, reflected as in a distorting mirror. (30) That a similar reversion to the primitive type of reading sometimes occurs in normal persons is shown by the common tendency to read aloud or in an undertone any passage the meaning of which is at all obscure. Whether this is purposive or automatic, helpful to comprehension or not, the important point to note is that it is occasioned by failure of understanding. The phenomenon may be compared with the echolalia elicited by riddles.

Some Notes on the Study of Insanity. By F. GRAHAM CROOKSHANK, M.D.Lond.(1)

"The evidence . . . so strong that the relations of mind and nervous structure are such that the cessation of the one accompanies dissolution of the other, while . . . with death there lapses both the consciousness of existence and the consciousness of having existed."

"Life is a continuous adjustment of inner relations to outer relations. Mind emerges . . . as fast as the adjustment becomes more extended, more involved, and more complete."

"If mind has been actually built up by this process, it can be, if not actually, yet theoretically, unbuilt by a reverse process. If it is composed of inner relations adjusted to outer relations, then it can be resolved into such inner relations."

HERBERT SPENCER: *Autobiography*, vol. i, p. 471.

MR. PRESIDENT AND GENTLEMEN,—That our certain knowledge does not extend beyond our states of consciousness; that of the mind we know nothing save that it is a series of "perceptions," a sum of "mental phenomena"; that the cause of this "series" or "sum" is a factor of which we know nothing; that no effort enables us to assimilate mind and motion; that the passage from what we call the physics of the brain to what we call the corresponding facts of consciousness is unthinkable—all these are truths necessarily recognised by those who refuse assent to propositions they cannot *know* to be true.

To discuss insanity as a state of mind is, unless these truths be admitted, as futile as would be a discussion on the national finances in which the arithmetical sum of two and two was allowed to be a matter of opinion. Yet many writers on insanity do not appear to think it of real importance that, not only have we no primary data other than those of our own consciousness, but that mental phenomena, whether those of sanity or insanity, cannot be properly studied unless the face is resolutely set against any juggling attempt to resolve what we call the psychical into what we call the physical series.

Living as we do in a world in which, as philosophers, we have to regard the psychical as the only directly known reality, and the physical as known to us only through the psychical, while yet our affairs and conduct are regulated by the working hypothesis that physical "phenomena" correspond to certain objective existences, there are obvious and great disadvantages in the exclusively psychical study of insanity.

In a conventional or empirical sense, then, we have to recognise that insanity is more than a condition or state of mind, a sum of series of psychical phenomena; and we admit that it embraces a physical state, a series of physical conditions, the signs of which differ, not in nature, but in arrangement and relation, from those physical signs of disease which we do not usually understand to indicate any part of what we call insanity.

But it is a necessity in studying insanity to consider the psychical and physical series separately.

The psychical series with which we are conversant is so short that it may be only as an octave in an illimitable keyboard; the physical series, as we know it, is relatively far longer. I can trace the physical antecedents of a bruised finger far away from my own person. I can speak of the stone that struck it,

and of the boy who hurled the stone. But I know of no psychical antecedent to the pain I felt when the stone struck me. If I did I should know what an animist would believe the stone to have felt when being propelled through the atmosphere. And as we cannot properly look for psychical causes of the psychical phenomena of insanity so we should not speak of the psychical causes of insanity.

The causes of the physical phenomena of insanity are, and must be themselves "physical"—that is, physical in the sense that physiological conditions are physical. Similarly there is no such thing as moral or mental treatment known to us. What we now refer to as "moral" or "mental" treatment is a part of physical treatment operating on physical conditions of the body through physiological channels by physiological stimuli.

It is deplorable in the extreme that by current usage these elementary notions should be ignored, and that we should persistently speak of psychical influences operating remedially or otherwise on insanity.

What we mean when we so speak is obvious enough; what we appear to mean is another matter. We do not really forget that states of consciousness are utterly different from nervous states, and that we cannot conceive psychical states to exist as separate entities—*in vacuo*, so to speak, divorced from correlated physical states and credited with a therapeutic dosage.

It may be useful, perhaps, to enunciate in two sentences Jackson's famous doctrine of concomitance, or parallelism. States of consciousness are utterly different from nervous states, but occur together with them. For every mental state there is a correlated nervous state, but there is no known interference of the one with another.

While this affirms that every conscious state is synchronous with a correlated nervous state, it does not affirm, what may be true, but what we do not *know*, that every nervous state, if not every cellular state, is correlated with a psychical though yet sub- or unconscious state. If this, which we do not know, be true, the disproportion in extension between the physical and the psychical series is reduced, if it does not disappear. Parallel lines are not, however, necessarily of equal length. To point out that the physical and the psychical series, as we

know them, are of vastly unequal length does not in the least contra-indicate the use of the similitude of parallels.

Those who hold the doctrine of parallelism, or concomitance, cannot admit that psychical states are *effects* of correlated physical states. But it is not out of harmony with the doctrine of parallelism, which is also one of synchronism, to assert that, though the conditions are synchronous, yet, apparently, the occurrence of certain variations in the physical *necessarily* coincide with the occurrence of certain variations in the psychical. Further than this we cannot go; but even so we can perhaps conceive how it may be that, though physical remedies cannot be known to cause psychical states, yet, using the terms with all stringency, the rectification by physical remedies of physical states is necessarily accompanied by the rectification of psychical states. In other words, physical means may cause physical alterations in nervous states which are synchronously *accompanied* by modifications in psychical states:—but not *caused*, or else the doctrine of parallelism is a mere logomachy, and false at that.

If the skin be pricked by a pin, after an appreciable interval sensation occurs. The prick sets up, or causes, states of peripheral nerves: these bring about certain (nervous) states of cortical cells. During the occurrence of these cortical cell states (or relations) psychical states occur. Time is taken up, not between the occurrence of the cortical cell states and the psychical states, but between the prick and the occurrence of the cortical cell states. In terms of the doctrine of parallelism, the sensation is not caused by the prick. Yet even so precise a writer as Huxley has, in at least one passage, fallen into verbal error on this point.

Now, every brain-cell is a definite link in a sensori-motor chain, or reflex arc, of greater or less complexity. With the activities of some only of these cells are, so far as we know, psychical or conscious states correlated. But, proceeding directly or indirectly from any cell or group of cells during whose activities psychical states occur, there is some outgoing impulse which is expressed either by physiological action or by inhibition of physiological action.(2)

It follows, then, that the essential physical phenomena of insanity are to be found in the states or relations of those brain-cells whose normal or healthy activities are accompanied

by the states of consciousness lacking, disordered, or anomalous in insanity.

The systematic study of insanity therefore embraces the study of:—

(1) Psychical phenomena. We cannot, however, observe states of consciousness in others, only what we take to be the physical expressions of the nervous concomitants of conscious states.

(2) The essential physical phenomena of insanity. We can only study these by having regard to the physiological effects, resultants, or motor outgoings of those cells whose activities are correlated with the disordered states of consciousness, making what, after all, is unproven and unprovable—the assumption that those conscious states which, for ourselves, are correlated with certain nervous states, having definite physiological expression, are identical with those conscious states which in others are correlated with nervous states having the same ultimate expression.

These—the physical signs of insanity—have been referred to in the *Journal of Mental Science* for January, 1900. It is, however, with regard to the first group of phenomena, the psychical series, that I now venture to make a few remarks.

Lewes, many years ago, defined "mind" as the sum of "mental phenomena." Such a definition approaches perilously near to the anatomist's description of the kidney as an organ of reniform shape. But we have to remember that the sum of states of consciousness which for each individual, whether he be sane or insane, constitutes mind, comprehends not only the consciousness of the moment, but consciousness become unconscious—latent knowledge recoverable by memory. And, possibly, such psychical states as may be conceived to accompany the functional and dynamic states of all nervous centres, or, at any rate, those states of consciousness which may accompany low nervous states under conditions which are not normal, but may not be present under normal conditions, or may be then present only in lesser degrees of vividness.

It is a commonplace of metaphysics that chance has no more place in the world of mind than it has in the world of matter, and that sensations, intellections, emotions, are all subject to an order as strict and as inviolable as that which obtains amongst material things.

I conceive that the study of psychical phenomena, the study of the psychical series, must in a very great measure be, then, the study of the order which obtains amongst the successive sums of psychical states which constitute for us each and all the egos of the moment.

By introspection we are made aware that the order of succession of sums of conscious states, or "egos," in passing from childhood to maturity is that of progression from sums of simple, undifferentiated, inco-ordinated states to others of complex, differentiated, co-ordinated states. In other words, for each individual the growth of mind is a process in the order of evolution—a process of integration and differentiation; and this that is true of the individual is also true of the race.

The history of evolution of mind in the individual is, as Schneider and Haeckel in particular have proved, a reflection, or epitome, of the history of the evolution of mind in the whole ascending series of species.

As old age creeps on, the maturity of middle life gives place to second childishness and whittles down to the vanishing point of mere oblivion. This, which we all know, only means that, as Ribot has so beautifully shown for the detail of memory, after maturity the normal order of succession of sums of states of consciousness is, for each individual, the order of progression from the unstable to the stable, from the complex to the simple, from the differentiated to the undifferentiated, from the co-ordinated to the unco-ordinated—the order that is, in fact, the reverse of the order of evolution.

It is convenient to speak of this order as that of "dissolution." But the term "dissolution" in this connection means simply "the reverse of evolution," and is divorced from all connotation of physical processes.

It is not in normal senile decay alone that the process of normal evolution is reversed, that the psychical series is in an order of involution or dissolution.

Unconsciousness, absolute unconsciousness, unconsciousness which finds no place for unconscious or subconscious psychical processes, is death, and marks always the end of a series of psychical states or sums of states arranged in this order which we have called that of dissolution.

What we commonly call unconsciousness, (and is that unconsciousness during which unconscious psychical states may

exist), whether it be the unconsciousness, normal and periodic, of sleep, or the unconsciousness, abnormal and catastrophic, of epilepsy and surgical anæsthesia, is but the penultimate or ultimate term of a series of sums of states arranged in the same order.

Montaigne the essayist quaintly expressed the idea thus :—

"Zeno found the soul as well as the body to be engaged in death—
It joyntly fades in one
Wearied as age is done.
Which thing the image of sleep doth manifestly shew unto us.
For he esteemed it a fainting or declination of the soul as well as of the body. He thinks the mind is contracted, *and doth, as it were, slide and fall down.*"

Can we better this expression of the doctrines of dissolution and of parallelism? For whether we consider the psychic phenomena of sleep, of surgical anæsthesia, of pathological coma, or of senility, we have to recognise that those states of consciousness which relate to the environment are first absent, and afterwards only those which relate to self, or are states of visceral consciousness. And conversely, just as in growth the individual recapitulates in epitome the history of the race, so does he in recovery from sleep, anæsthesia, or coma, recapitulate in epitome the manner of his own mental development.

We are apt to forget, perhaps, that considerations of time and of magnitude are irrelevant to the discussion of evolution. Evolution is the expression of an order, and its discussion is concerned with serial arrangements. It is not a theory; it is not an explanation; it is a statement. The order of the succession of the films in a cinematograph demonstration is the same whether the rolls be slowly unwound by hand or at a high speed by electricity—whether the roll be unwound so that some of the presentments are separately realised and others not, or all are shown with the same distinctness. And so it is that the order of the succession of sums of conscious states in the normally recurrent process of falling asleep is precisely the same as in the slower dissolution of senility. This does not necessarily carry with it the suggestion that the separate sums of conscious states are themselves identical, only that the order is the same and the states are similar in kind.

Just so has Dr. Mercier pointed out, in justifying the inclu-

sion of delirium with the insanities, the essential resemblances in order and kind between the phenomena of a dust whirl by the roadside and those of a cyclone. Like causes produce like effects. As with the falling apple, so with the solar system. And we have in our lives curves upon curves, a daily rise and fall, and still one long rise and fall.

It is not fanciful to say that the poet's phrase "life's fitful fever" has an almost literal application. We have our daily rise and fall, our gain and loss; at first the one preponderates, at last the other; we have the rise, the fastigium, the declination, and the end, to some sudden, to others gradual, to all inevitable. Yet whether our mental life terminate by crisis, or by lysis, the order of the succession of the phenomena is always that which, as Huxley has eloquently said, from the lowest forms of life to the highest, preserves the same appearance of cyclical evolution.

"Cyclic change meets us on all sides, in the water that flows to the sea and returns to the spring, in the heavenly bodies that wax and wane, go, and return to their place, in the rise, apogee, and fall of dynasties, and in the inexorable sequence of the ages of man's life."

It cannot be denied that in progressive insanity sums of states of consciousness appear to succeed in an order not only as definite and as inexorable as that which obtains in normal dissolutions, but actually the same. The difference between the normal dissolutions of sleep and senility and the abnormal dissolution of insanity is firstly in time, secondly in regularity, thirdly in extension. For the more regularly insanity advances, and the greater its extension the more cases approximate to one type, becoming less differentiated from each other and from other forms of mental dissolution.

Dr. Clouston has said that the strongest common clinical and pathological tendency of every form of mental disease is to end in dementia, or, in other words, to progress:—a position supplemented by Dr. Blandford's dictum that melancholia is the least departure from the normal and that most likely to pass away.

Many years ago Sankey wove the ideas underlying these dicta into his splendid generalisation that insanity is but one process, and that the so-called varieties are merely differentiated by non-essential phenomena; that all insanities begin with

melancholia and tend to pass through a succession of stages in the order (1) melancholia, (2) mania, and (3) dementia; a succession liable at any time to interruption by recovery taking place in the order of (1) dementia, (2) mania, (3) melancholia. I do not know that Sankey's generalisation ever received adequate attention. Its importance does certainly appear to be not always recognised even now.

Perhaps one reason is that so much attention is paid to *names*, and so little to essentials. The application of the term "melancholia," instead of being restricted to the cases indicated by Dr. Blandford as being those least divergent from the normal (and which are for certain reasons *usually* characterised by a depressed emotional tone), has been extended to many cases which are really cases of mania or dementia.

The old notion—it can hardly be called an idea—that in states of mania there is really something expressed by the term "exaltation" dies hard, and one may still trace in contemporary writings the suggestion that mania and melancholia are opposites in some such sense as are dilatation and contraction. One might as well speak of spastic paralysis being an "exaltation" of the motor function of the cortex cerebri as of mania being a state of "exaltation of mind."

We may, however, accept the terms "melancholia," "mania," and "dementia" as convenient labels for cases in which the sums of states of consciousness are believed to be particular kinds of aggregates.

And we have, then, in Sankey's thesis a convenient statement of the order in which, during the progress of insanity, kinds of aggregates of states of consciousness occur, a statement, too, which is absolutely consistent, if essentials and not phrases be regarded, with the writings of almost every observer.

Melancholia has been described as the kind of insanity evolutionarily, clinically, and hereditarily farthest removed from dementia. And that melancholia may—and frequently does—pass into mania; that acute mania is generally ushered in by hypochondriasis; that most cases of chronic mania have dementia superadded, and tend to become progressively demented; that acute mania not ending in recovery passes gradually into dementia; that paranoia, developing as melancholia or mania, passes into dementia, and is a "chain of which

emotional disturbance is a first link"; that katatonia is a stage in a process of mental degradation which, commencing with depression, passes into excitement and, if recovery does not ensue, into dementia; that cases of persecution mania pass through successive stages of depression, mania, and dementia; that general paralysis is in its earliest stage frequently mistaken for melancholia or hypochondriasis:—all these are commonplaces, disputed by none, but collectively forming only a part of the overwhelming evidence that there is in insanity one invariable order in which psychical states occur—that insanity is, in fact, one process, and the "varieties" of insanity either different stages of one process or examples of one process differing in completeness and in rapidity.

How absurd it would seem if we heard that physicians considered phthisis to be, not one disease, but a group of many kinds of lung disease, one variety of which should be called consolidation, another cavitation, a third dextral, a fourth sinistral, and a fifth bilateral!

Surely we should recognise melancholia, mania, and dementia as stages of one process—that of mental dissolution; and we should distinguish the varieties of insanity from the psychical point of view, as the process be speedy or dilatory, regular or irregular, partial or complete.

The etiology of insanity obviously has no place in any consideration of the psychical series, and can only, for the reasons I have earlier stated, be discussed with the analysis of the physical series of phenomena.

Using the phraseology employed by Dr. Bevan Lewis, "mind" is a sum of states of object consciousness and states of subject consciousness—as Spencer would have said, of outer relations and inner relations.

And if melancholia—that is, the insane condition nearest the normal—be analysed, it is seen that there is a quantitative lessening, or at any rate qualitative degradation, of the total states of object-consciousness entering into the aggregate of conscious states which constitute for the moment the mind of the person affected.

From this it follows that there is a relative, but only relative, increase in the totality of states of subject consciousness, though they too may be absolutely, yet in a lesser degree, diminished in "volume" or "intensity."

Hence arises the egoism which distinguishes "melancholia" from the "melancholy" which characterises those in whom altruism is most highly developed—those whose mind is far above the normal, or average, in content. And it is owing to the lack of adjustment between the subjective ego and the true environment, which is seen through a glass darkly, that in melancholia the tone of feeling is one of "opposition" or "depression."

But the frequency with which this tone of feeling and its correlated physical expression accompanies early and positive reduction in states of object consciousness has led to the characterisation of this reduction by a name which is also applied when the same tone of feeling is thought to be recognised—by its apparent physical expression—in states of mind other than those in which there is simply initial reduction or blurring of states of object consciousness.

If now, after the stage of melancholia be reached, progressive reduction of mind continue, the states of subject consciousness are lessened in number and intensity, though always to a lesser degree than are the states of object consciousness, until, states of object consciousness having practically disappeared, we have first a subjective ego adrift from environment, then an actual invasion or alteration of the subjective ego. The mind becomes merely a sum of such states of subject consciousness as may be left unimpaired, and there is no longer *necessary* reason for the existence of negative tones of feeling.

The ego is something composed of the wreck of old memories —there is, in fact, mania with delusions.

With further reduction in the totality of mind, states of consciousness become so few that the application of the term "dementia" is justified. In strictness amentia, total unconsciousness, unconsciousness without even sub-consciousness, is actually death—psychical annihilation.

Sankey's proposition may be represented diagrammatically. Represent the sums of states of consciousness of a sane man as bounded by two concentric circles of different diameter; the sum of states of subject (visceral) consciousness as enclosed by the smaller circle, and the sum of states of object (environmental) consciousness as lying between the inner and outer circles. (An apter representation would, perhaps, be one of

spheres, not circles.) The order of invasion or reduction is always from without inwardly, and, whichever be the sector or sectors attacked, the area of object consciousness is lessened first, that of subject consciousness secondarily. However irregularly the invasion spreads, the order of the zones attacked is always the same.

As Montaigne has said, " there is no weakness or decay so universal but some entire or vigorous parts will remain." So, though the line of invasion, the order of encroachment from outside to the centre, is invariable, the extension and regularity of the invasion may vary almost infinitely. Our cases, our so-called clinical types, do so. But yet the more symmetrical and regular the process of ablation of mind, so the more closely do our cases of insanity approximate to the one type recognition of which is so necessary to our understating of what insanity is.

May we not say that insanity, as a state of mind, is one in which there is substitution of simple, organised, undifferentiated and inco-ordinated states of consciousness for complex, unorganised, differentiated, co-ordinated states of consciousness, tending to progress towards annihilation; liable to arrest or reversal, and, while similar to that which occurs in senility, anæsthesia, delirium, and intoxication, differing in circumstances of time, regularity, symmetry, and uniformity, and in the etiology of the correlated physical processes?

This conception of the progress and process of insanity corresponds exactly, I think, both with Sankey's proposition and with what we should expect *a priori*, if told that insanity was a reduction of mind in an order the converse of that of evolution.

The proof of this requires the statement and correlation of a vast number of facts, for which the present is no opportunity. But it is capable of demonstration:—

(1) That the psychical phenomena of insanity occur in the same order as do those of sleep, delirium, intoxication, anæsthesia, and senility.

(2) That this order is the reverse of that which obtains in individual or racial development, and in recovery from sleep, delirium, intoxication, and anæsthesia.

(3) That in recovery from insanity the order of psychical phenomena is that of individual and racial development.

(4) That the occurrence in insanity of delusions, hallucinations, and obsessions is not in contravention of the order of sums of states of consciousness described, but is due to it and the conditions under which it obtains, and has analogies in the history of racial and individual development and decay; moreover, that the particular character of delusions and hallucinations is determined by the extension and regularity or otherwise of the process of dissolution as well as by the content of the mind affected.

I have tried, sir, to outline just one detail of a systematic study of insanity based on acceptance of the limits of our actual knowledge. This acceptance renders it necessary that the psychical series and the physical series be studied separately, without verbal confoundings and transmutations. In respect of the psychical series we have to study, not merely the kinds of conscious states occurring, but the order in which they occur. It is only when we study the physical series that we are justified in considering the etiology and treatment of insanity. In particular we have to study what I have defined as the physical signs of insanity.

If systematic investigation be made, and systematic thought conducted, on these lines, we shall find that insanity is a process of parallel psychical and physical dissolution with the clinical presentation described by Sankey. We shall realise, moreover, that we have not to do with "mental diseases," but with dissolutions of mind and nervous system varying in completeness, in regularity, and in rapidity, and determined, so far as the nervous system is concerned, by various physical causes. We shall abandon the vain practice of attempting to classify processes by recognising as different things different stages of the same process, and we shall employ instead a classification which is based on the causes of the physical phenomena. We shall treat insanity, not by windy talk about "appropriate moral and mental remedies," but by employing physical means to rectify the physical series, knowing from experience that restitution of physical (nervous) states is necessarily accompanied by restitution of psychical states.

After all, then, it imports little that the "substance" of matter is as purely a piece of metaphysical speculation (for all we know) as is the "substance" of mind; that the psychical series as known to us is far shorter than the physi-

cal; and that the physical is known to us only through the psychical.

As Huxley said, "the speculative game is drawn; let us get to work."

(1) Read at the Quarterly Meeting of the Medico-Psychological Association, in London, November 16th, 1905.—(2) In every case of insanity there is a negative lesion causing sensory or motor paralysis (Hughlings Jackson).

Multiple Lipomata in General Paralysis. By CONOLLY NORMAN.(1)

THE following case presents certain points of interest. The extreme prominence of pain crises in the beginning is unusual. Suicidal tendencies in general paralysis are sufficiently uncommon to be noteworthy, though they are by no means as uncommon as is generally supposed. The same may be said of delusions of conjugal infidelity. Finally, multiple lipomata occurring in this disease have not, as far as I am aware, attracted the notice of any English author.

CASE 17,391.—Male, æt. 40. Married for some years; two children, æt. respectively 4½ years and 5 months. The man had been manager and part owner of a shop in Dublin. He was said to have been a sober and industrious person. I saw him first in March, 1895, in consultation with Sir Thornley Stoker, who desired my opinion as to whether the case was probably, as he deemed it, one of general paralysis in the tabetic form. I expressed my concurrence in his judgment. The history showed no known taint of insanity in the family. Patient had had syphilis about sixteen years before and believed that he had been thoroughly cured. His wife was healthy and had had no miscarriages, and his children were healthy. The first sign of the existing illness was tremor in the right hand, which appeared about two years ago. In consequence, his writing became gradually worse and worse, until it was wholly illegible. This interfered with the performance of his business. He said that his left hand was not at first affected, but after a time it became as bad as the right. (Possibly the condition was simultaneous in both, but first attracted attention in the right.) Then he began to suffer from agonising attacks of pain in the