It was cleanly torn off, and had not carried with it any fragment of bone. The tendon was reimplanted by means of three silk sutures which were passed through its extremity, and as low as possible through the aponeurotic sheath which accompanied the tendon to its insertion into the radius. The anterior aspect of the arm then assumed its normal appearance. The opening in the biceps sheath was united with catgut, and the wound in the skin was closed. The limb was supported with the elbow flexed at an acute angle. Union by first intention took place. The arm was kept in a sling for six weeks, so as not to stretch the scar in the tendon. Then massage and electrical treatment were adopted. Six weeks later the biceps, which had diminished to half its normal size, had regained three-quarters of its volume, and its power was progressively returning.

THE POTATO.

THOUGH the poisonous alkaloid and glucoside known as solanine is a normal constituent of the healthy potato, references to toxicological literature fail to furnish any decisive evidence that the tuber has caused any widespread or serious illness. In these days, when alarming symptoms of poisoning may sometimes be traced to food in which, for some mysterious reason, the poisons known as ptomaines have elaborated themselves, it is just as well when searching for the *fons et origo mali* not to forget the potato, for under certain conditions solanine may be found in unusual quantity, and this alkaloid may set up the usual disturbances which are characteristic of an irritant poison. In the normal potato the amount seldom exceeds 0·01 per cent., but this may easily be exceeded in the diseased potato. Sprouting potatoes seem to contain a more than usual quantity of alkaloid, while it is also more likely to be present in the immature potato. Thus the potato residues, consisting probably of sprouting potatoes, from a distillery have been found to be responsible for the occurrence of poisonous symptoms in cattle, and solanine was separated from the mash by analysis. It appears to occur in larger proportion in the peel, so that there may be reasons for avoiding the "jacket." Though not very soluble in water it is probable that boiling removes some of the alkaloid. As we have stated, however, there is little in toxicological records which amounts to a serious indictment against the potato, and the small doses which occur are stated by some authorities to be an excellent sedative, more efficacious in long-standing neuralgia, especially when neuritis is present, than either antipyrine or antifebrin. We have little doubt that oftentimes a judicious diet of potatoes would be of greater benefit to a good many self-physicking people than a dose of some antipyretic substance which they regard as adapted to relieve all headaches whatsoever their origin.

A TYPHOID CARRIER STATE IN RABBITS.

THE importance of the part played by typhoid carriers in the spread of the disease among mankind is now generally recognised, and consequently any light that can be thrown on this condition by experimental research, and especially anything tending to indicate the best method of treating such carriers, is of much clinical interest. In a paper recently published in the *Journal of Medical Research*¹ Dr. John Anderson Johnston records some results obtained in artificially producing in rabbits a "carrier" condition. He inoculated these animals intravenously with a suspension of typhoid bacilli in saline solution and then examined their blood and fæces for signs of infection. The organisms began, as a rule, to appear in cultures from these materials

in from seven to ten days; indeed, in two instances a diarrhoeal affection started within two days and the bacilli were found in the stools. The rabbits were then vaccinated with dead cultures of the organisms, and the bacilli disappeared within a space of 30 to 60 days from the original inoculation. Of seven vaccinated animals which came to necropsy five were entirely negative with respect to cultures of these bacilli, while the two from which they were obtained had both died within a short time of being treated. On the other hand, of 11 vaccinated animals all but one showed the presence of bacilli, though five did not harbour them in any part except the gall-bladder. Similarly, in two animals in which the bacilli had disappeared, so far as cultures from the blood and fæces went, during life, puncture of the gall-bladder gave positive results. It is thus shown that in the rabbit, as in man, the gall-bladder is a seat in which the organisms may persist when they have elsewhere vanished. Further, in two animals in which the bacilli could no longer be found in the fæces the administration of a dose of ox bile, which caused an attack of diarrhoea, was followed by their reappearance, just as catarrhal conditions of the bowel may in man give rise to renewed excretion of typhoid bacilli in the stools. From these experiments it would seem that vaccination is indicated in all cases in which a carrier state exists in human beings, and that careful examination of the fæces should be made in all cases of typhoid fever, just as the throat is swabbed after an attack of diphtheria, to ascertain that the organisms have ceased to be excreted by this route and that the convalescent is no longer, so far as can be discovered, a source of danger to others.

Dr. William Brown will give a public lecture on Abnormal Psychology at King's College (University of London) on Wednesday, April 23rd, at 4 P.M. Professor W. D. Halliburton will be in the chair.

FREUD'S THEORY OF DREAMS.¹

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I.

WHEN the secretary of the Listerian Society very kindly invited me to read a paper on something of medical interest connected with the science of psychology, Professor Sigmund Freud's psychiatric system at once occurred to my mind as the most suitable theme for such a discourse. Not only are his views winning ever wider acceptance among leading psychiatrists of all nationalities at the present day and justifying themselves by practical results, but they are also very good illustrations of the help which strictly psychological methods of thought may bring to the science and art of medicine.

Theoretically the connexion between psychology and medicine must be a very close one. Only on the theory of materialism can its importance be denied. According to this view psychical process is merely the result of physiological process occurring in different parts of the cerebral cortex. All mental disease would therefore be merely the effect of cerebral disease, and consequently attempts to cure by mental methods would involve the absurdity of treating the symptoms of the disease and not the disease itself. But by far the greater number of thinkers qualified to pass a reasoned judgment upon this question of the relation of mind to brain agree in rejecting the materialistic view. The two other alternative theories of the relation—viz., interactionism and parallelism, both give great scope for the use of mental methods in therapeutics. This is obvious in the case of interactionism, according to which the mind is an entity distinct from and partially independent of the brain,

¹ *Journal of Medical Research*, November, 1912, vol. xxvii., No. 2, p. 177.

¹ A paper read before the Listerian Society at King's College Hospital on Jan. 21st, 1913

exhibiting laws of action not entirely identical with the laws of brain activity. But it is equally true for parallelism. The theory of psycho-physical parallelism states that there is a point-to-point correspondence between changes in certain parts of the cerebral cortex (and possibly other parts of the brain) and changes in consciousness. For every occurrence in consciousness there is some corresponding physiological change occurring in some part of the brain. There is, however, no relation of causality between the physical and the mental series of events. Rather are these series to be regarded as different sides or aspects of the same real process. But if this be so, change in the real process can be produced from without—i.e., by external agency—from either of its two sides, the physical or the psychical, indifferently. Mental disease is also cerebral disease, but it is quite as legitimate to attempt to produce a change on the mental side by mental means as to produce a physical change by physical means. A mental change, *eo ipso*, involves or brings along with it a corresponding physical change in the brain and *vice versa*.

Whichever theory we adopt, one thing at least is clear—namely, that our knowledge of mental processes is very much more precise and complete than our knowledge of the corresponding processes in the cerebral cortex, and explanations of mental disturbances in terms of memory ideas, imaginations, desires, and wishes are really more logical than those in terms of hypothetical nerve cells and nerve fibres so beloved by some physiologists. It is quite possible, and on the parallelist hypothesis it is more than probable, that ultra-microscopical changes in the cerebral cortex accompany all cases of so-called functional mental disease, where gross lesions of the brain have not hitherto been demonstrated, but ignorance of them need not deter us from formulating psychological theories which may justifiably claim to explain the changes that are observable—viz., the mental disturbances of the patient.

It may cause surprise to some of my hearers that I have chosen Freud's Theory of Dreams as the special subject of my paper, but I have done so for very good reasons. In the first place, it is a fact, emphasised again and again by Freud himself, that this theory is the central core of his whole system of psychiatry, and the one that during the lapse of years he has found least reason to modify. It is through a study of dreams that we can alone arrive at an adequate and direct appreciation of the nature of the *unconscious* and of its significance for the conscious mental life. In the second place, the now famous method of "psycho-analysis," introduced by Freud and elaborated into a definite technique by Jung, is most easily understood and most convincingly justified in Freud's scheme of dream interpretation, in which it plays a prominent part. Finally, dreaming is a normal function of the mind, and may therefore be safely discussed by a psychologist who can lay claim to no first-hand knowledge of pathological cases. Yet if Freud's theory be true that dreams are formed according to the same fundamental laws that produce the symptoms of hysterical patients, a careful study of the former must add very considerably to the intimacy and effectiveness of our knowledge of the latter. A psychologist is only entirely within his own domain when he is face to face with facts of consciousness. These he can only observe within himself, and his dreams (together with what is added to them by psycho-analysis) may therefore give him an insight into the nature of hysteria which according to any other theory of the disease must be denied him so long as he remains normal.

The outlines of Freud's theory of dreams are well known. Every dream is the fulfilment of some wish. In the great majority of cases the wish is one that has been repressed by the waking consciousness, and its fulfilment in the dream is disguised according to rules that are both complicated and diverse. It is for these reasons that the general law has so long escaped notice, and scientists have been so ready to deny all significance to dreams. This state of things is inevitable so long as attention is restricted to the dream simply as it appears in consciousness and as it is remembered by the dreamer. But corresponding to this "manifest content" of the dream there is a "latent content" which constitutes its meaning, and when discovered by the method of psycho-analysis is found invariably to be the fulfilment of some wish. The manifest content is made up of memories from the past life of the dreamer, patched together in

apparently quite random order and according to the most superficial laws of association. The laws of rational connexion, especially those of causation, which dominate waking consciousness, seem to be in abeyance, and in their place the only laws of connexion observable are those of association by contiguity and association by similarity. As a general rule the memories most commonly aroused are those of the "dream-day" (the day before the dream) and those of early childhood. Memories of the dream-day form part of every dream without exception. Actual bodily disturbances, either of the external sense organs or of the internal organs are, when not too intense, incorporated in the dream though in a disguised form. In this way every dream may be regarded as fulfilling at least one wish—viz., the wish to go on sleeping. If these actual stimuli were recognised for what they are the dreamer would no longer be asleep but awake, and this is what happens when they become too intense. Thirst arising during sleep may produce the dream-experience of drinking water in huge draughts. In this way are fulfilled the two wishes, to continue sleeping and to drink. Other bodily needs arising during sleep may receive imaginary satisfaction in the same way. Instances like these illustrate very clearly the function of dreams in acting as the guardians of sleep.

Freud relates an amusing story of a medical student who was very fond of his bed, and could only with the greatest difficulty get up in time for his work at the hospital. One morning on being called by the maid, who shouted through the door, "Get up; you must go to the hospital," he half awoke, and then proceeded to dream of a ward in the hospital in which he found himself lying upon a bed with a card hung over the head of it stating his name, age, and occupation. Remarking to himself: "Since I am already in the hospital I do not need to get up and go there," he turned over and continued his sleep.

Numerous instances may be quoted in which the fulfilment of a wish appears in the dream in clear and undisguised form. The dreams of young children are almost invariably of such a nature. Desires, of which the satisfaction has been denied them during the day, again and again appear as fulfilled in the dreams of the following night. This kind of evidence is obviously of the highest importance for the theory of dreams, since the child's consciousness shows the laws of mental process in their simplest and most fundamental forms. The wish-fulfilments of adults are as a rule expressed somewhat less directly, even when they do not belong to those unconventional and consequently "repressed" forms which will engage our attention more fully presently. Recently, while working for a medical examination which it was most important that I should pass at the very first opportunity and for which I had been able to find very little time for preparation, I dreamt one night that someone showed me the examination paper, although it was some days before the date of the examination. Not until some time after the dream did I realise its true significance and its connexion with my intense desire to pass. On another occasion, while anxiously waiting for the appearance of certain reviews which I had written for one of the daily newspapers, I dreamt that I received yet another batch of books from the same source. This dream was evidently a slightly indirect fulfilment of my wish that the other reviews of mine had not miscarried and would shortly appear.

Instances of such clear wish-fulfilments in dreams must be frequent in everyone's experience, and it may with some degree of plausibility be objected that they do not necessitate any theory more elaborate than the one most generally accepted—viz., that dreams are simply the revival, in chance order, of memories aroused during the condition of sleep. For the imagined fulfilment of wishes may reappear as memories, just as other forms of consciousness do. Freud, however, does not admit this, since he finds that every kind of dream, whatever the nature of the memories which unite to form its "manifest content," shows under the treatment of psycho-analysis a clear reference to the fulfilment of a wish or wishes, which often gives the dream an entirely new aspect.

The method of psycho-analysis is simply a method of free association. The subject whose dream is being interpreted is asked to adopt the mental attitude of meditative expectancy, and in this frame of mind to consider the parts of the dream one after another and say just what ideas

spontaneously occur to him in connexion with each. It is essential to the success of the method that he should rigidly keep in abeyance any tendency to criticise, modify, or reject any of these ideas as they arise, and that he should make a faithful record of all of them, however absurd or objectionable some of them may appear to be. The ideas which thus arise by free association will be found all to converge to one system of ideas concerned with the fulfilment of a wish. This system of ideas is the "latent content" of the dream, or the "dream-thought," and gives the dream its meaning and its *raison d'être*. The wish involved in it is one that is not in harmony with the conventional and ethical ideas of the developed personality, and is therefore entirely repressed during waking consciousness and can only attain realisation in the dream consciousness of sleep in underhand and roundabout ways which have still to be described.

The repressing factor in the waking consciousness is named by Freud the *endopsychic censor*. The term is somewhat figurative, but lends itself well to the purposes of vivid description. In sleep this censor is still active, though not to the same degree nor with the same watchfulness. If only the repressed wish can disguise itself sufficiently, it may succeed in slipping past him unnoticed, and so rise into the half-light of dream consciousness. Before discussing in detail the various ways in which the wish may accomplish this disguise, and which Freud classifies under the general heading of *Traumarbeit*, or dream work, I will give a description of one of his own dreams, together with a summary of its psycho-analysis.² I must, however, first summarise his preliminary explanation which alone makes the dream intelligible.

Freud heard in 1897 that two professors of his university had proposed him for the position of professor extraordinarius, election to which he doubtless greatly desired. After receiving this news, and on the day before the dream, a colleague, who had for some time waited without result for the success of his own nomination to a similar professorship, visited him and told him that he had at last gone to a high authority about the matter and had learnt that his non-success was due to his religion and nationality. Freud suffered from the same disadvantages, and so might on this score draw but a discouraging conclusion from the news as to the probable fate of his own nomination. "On the morning after this visit," writes Freud, "I had the following dream I. Friend R. is my uncle. I feel tender affection for him. II. I see his face somewhat altered before me. It is, as it were, drawn out lengthwise, a yellow beard which surrounds it stands out with exceptional clearness."

At first Freud was inclined to dismiss the dream as an absurdity, but remembering that in the case of his own patients this tendency often indicated that the meaning of the dream was a disagreeable one and such that the person was loth to admit even to himself, he proceeded to analyse it, pondering over it sentence by sentence and noting what ideas occurred to his mind while doing so. It then became clear to him that the face was, as it were, a composite photograph of the friend of the previous evening's conversation and one of his uncles, who had been unfortunate enough to come within the arm of the law. His father was in the habit of attributing this uncle's downfall not to wickedness but to weakmindedness. Consequently the dream purports to say that his friend R. is weakminded or stupid, like his uncle. Further reflection brings to light the memory of a conversation with another colleague who had likewise been unsuccessfully nominated for professor and who attributed his failure to an accusation brought against him by one of his patients. The courts had dismissed the charge as entirely unfounded and malicious, but the incident could not fail to injure his prospects. The meaning of the dream is now clear. The uncle represents just those two colleagues of Freud who had been unsuccessful in their nominations for professorships. By disingenuously insinuating that one of them is stupid and the other a criminal the dream clears the way for the success of Freud's own nomination, since on these assumptions the fact of his religion need not weigh against him. The dream represents the *wish* that this might be the real state of affairs—a wish that Freud would not for a moment entertain in the waking state or even in manifest form in a dream.

The tender affection experienced in the dream still needs

explanation, since it is much more pronounced than that which Freud had ever felt for his uncle or for his friend. Reflection shows that it does not belong to the latent content. It is directly contrary to this content and eminently adapted to hiding the full significance of the dream-thought from the dreamer himself. This indeed is its real purpose. By changing the appropriate feeling-tone of the latent content into its opposite the wish has succeeded in evading the censor and achieving its own dream-fulfilment.

Other ways in which the latent content may disguise itself are by transferring the feeling-tone from one part of the manifest content to another, by altering the emphasis of different elements in the manifest content, so that a prominent element corresponds to an unimportant part of the latent content, and conversely, and, above all, by the use of symbolism. This symbolism is, to some extent, different for different persons, and also for different nationalities, since it partly depends upon the chance associations of experience and upon the similarities of words representing different objects. But some symbols would seem to be common to the majority of people, especially in matters connected with sex. Sexual relations may be represented by walking up and down stairs, by flying, or by journeying in a train or other vehicle. Entering into water may symbolise, by opposites, the fact of birth. Hats and shoes in dreams often have reference to sex. Many other symbolisms are met with which are too obvious to need mention here. Freud records the case of a woman who dreamt that she saw her fifteen-year-old daughter lying dead in a box, in which psycho-analysis showed that the latent content of the dream was a wish dating 15 years back that the child might die before it was born. This is a good illustration of the way in which wishes may persist for years in the unconscious uninfluenced by later experience.

In Freud's opinion a very large proportion of the repressed wishes which realise themselves in the dreams of adults originate in early childhood. They are also, he thinks, predominantly sexual in nature, the sexual mental life of the child beginning much earlier than scientists have generally supposed. The sexual inclinations may find their earliest objects in the parents, and then undergo vigorous repression as the result of further development and education. These repressed wishes may show themselves later in dreams, or, when very strong and very firmly repressed, may give rise to more serious symptoms. The attraction is accompanied by feelings of hatred and jealousy towards the parent of the opposite sex. These are repressed in the same way and for the same reasons, and may in later life produce dreams of the death of the father or the mother, as the case may be.

The legend of *Œdipus*, who unwittingly marries his own mother, *Jocasta*, and, though guiltless in intent, pays the penalty for this unholy act, is a mythical representation of this general tendency in human nature. Freud would explain the mystery of *Hamlet* in the same way. *Hamlet* is unable to take vengeance on the man who has supplanted and murdered his father because he himself in his early youth had wished his father's death. The wish has been vigorously repressed and he is at present unconscious of it, but it still exists in his unconscious and produces the inhibitory effects depicted in the play. Freud considers that repressed wishes of this nature are the principal factor in the production of all the psychoneuroses.

If we bear in mind that children's ideas of death are very vague and in most cases correspond simply to "permanent absence," the theory is not so outrageous as it might otherwise seem to be. The "naturalness" of family affection has undoubtedly been greatly exaggerated by earlier thinkers, and the passions of hostility aroused within the family circle are often very fierce. As the children grow up these feelings generally disappear and make way for the more conventional and intellectualised forms of sentiment, but deep down in the unconscious recesses of their souls persist the traces of earlier conflicts.

It may be thought surprising that such an immoral wish as that of death should ever succeed in passing the censor and attaining to a dream-fulfilment. Two facts sufficiently explain it. In the first place the wish is the last in the world that we should ever consciously entertain, and for this reason the censor is unprepared for its appearance. In the second place the wish-fulfilment is accompanied in the dream by a feeling of intense sorrow which seems to receive

² See *Traumdeutung*, dritte Auflage, S. 100-104.

a sufficient explanation in the anxiety for the person's welfare which the dreamer has genuinely felt in more recent times, especially during the dream-day, and which might be expected to persist as a memory in the dream. The real source of the sorrow is the fact that the censor has been overpowered.

These considerations suggest the probable explanation of all forms of *anxiety dreams*, which are accompanied by pain, and seem therefore in such flagrant contradiction to the wish theory. Freud writes:—

The anxiety dream only occurs when the censor is partly or entirely overpowered, and on the other hand the overpowering of the censor is facilitated when anxiety as an actual sensory experience is already given from bodily sources. It thus becomes evident to what end the censor exercises its function and brings about the distortion of dreams; it does so in order to guard against the development of anxiety or other forms of painful feeling (p. 193).

And again in another passage (p. 171), distinguishing two types of anxiety dreams:—

On the one hand, the anxiety in the dreams may be a psychoneurotic one, springing from psychosexual excitations, where the anxiety corresponds to repressed *libido*. In this case the anxiety, and the entire anxiety dream, have the significance of a neurotic symptom, and we stand on the borderline, where the wish-fulfilling tendency of the dream suffers shipwreck. In other anxiety dreams, however, the anxiety feeling is given in the bodily conditions (e.g., accidental difficulty in breathing, as in the cases of heart- and lung-patients), and then this feeling is made use of to help such energetically repressed wishes to a dream-fulfilment, the dreaming of which from psychical motives would have aroused the same anxiety feeling.

I have quoted these passages in the author's words because they are so crucial for his whole theory both in its psychological and in its pathological aspects. For my own part, and on the basis of my own experiences, I find it very difficult to agree entirely with this explanation. It may not be special pleading, but it seems very much like it. Why this persistent and almost impertinent faithfulness to one idea? Are not fears just as primitive as wishes and just as capable of repression without annihilation? May we not broaden the basis of our explanatory system? Freud has considered these and other possibilities, and on the basis of experience rejects them. But it is difficult to see how experience can force us to the wish-explanation when the huge class of anxiety dreams require such complications of the theory before they can be brought into line with the others.

In this connexion I might mention a striking experience of fear-repression with persistence in the unconscious that happened to me about a year ago. One day while out hunting I had two bad falls in rapid succession, but in the excitement of the chase felt none of the organic disturbances of fear, much to my own surprise. That night I dreamt of the entire hunt from start to finish, but with the intensest fear. My heart felt literally in my mouth the whole time. Even now the feeling sometimes recurs at night, although during the day I feel nothing of it and have not found it interfere with riding.

It is difficult to explain a dream of this kind in terms of wish-fulfilment, although the other part of the theory, the repression, is well illustrated by it. Freud's theory would fall much more completely into line with the views of modern psychology if in it he replaced "wish" by "emotional or instinctive tendencies." Examples of such emotional tendencies are fear, anger, self-assertion, self-abasement, and disgust, and systems of ideas tinged by these emotions may be on occasion driven from the main consciousness into the unconscious and reappear, under certain conditions, in dreams.

II.

We have still to consider Freud's theory of dream-synthesis as distinguished from dream-analysis. Many different kinds of processes may be detected in the *Traxarbeit*, or dream work. In the first place there are those processes of disguise adopted by the latent content which I have in outline already described. Secondly, there are the means which the dream-thought employs to represent those thought-relations, or relations of predication, which the manifest content cannot directly express in their real form. Logical connexion in general in the latent content is represented by simultaneity in the manifest content. The relation of causality may be represented either by a mere succession of dream images or by an observable transformation of one into another. In the first case the succession is often between one dream and the next. Similarity is represented by unification, in the form either of identification or of a

composite picture. These expressions of similarity often serve to represent a *desired* similarity. Relations are often represented in the manifest content in a reversed form; even in the succession representing causality the effect is frequently put before the cause. The explanation of this is, of course, the desire to evade the censor. Lack of clearness in the dream often represents actual uncertainty in the dream thought. One of Freud's patients at first refused to relate her dream to him "because it was so indefinite and confused." Finally, after some persuasion, she said "that there were several persons present in the dream, herself, her husband, and her father, and that she didn't seem to know whether her husband was her father, or who her father really was, or something of that sort." The explanation was that she was expecting a child, and that her friends had been bothering her to know "who exactly the father was." Evidently in such a case as this the lack of clearness is really a part of the dream-thought.

There are two general characteristics of dreams which deserve special mention. One is "*condensation*" (*Verdichtung*), where, through appropriate choice of material for the manifest content, the dream expresses the fulfilment of several wishes in one short dream experience. The manifest content chosen is as it were a nodal point or a number of nodal points from which important trains of association lead in different directions to eventually reach and sustain a number of wish-fulfilments. Each part of the manifest content is overdetermined, so that "*overdetermination*" (*Ueberdetermination*) is simply the other aspect of condensation. The second characteristic is that of "*displacement*" (*Verschiebung*), and has already been mentioned in another connexion. It consists in a shifting of emphasis or of psychical intensity from one part of the dream to another, "a transvaluation of all values" as Freud calls it, and produces a distortion of the dream which helps the repressed wish to evade the censor.

A tendency towards the rationalising of the manifest content along lines different from those of the hidden wish-fulfilment may often be detected in a dream, and may also continue to exert an influence on it after waking. This is what Freud has named "*secondary elaboration*," and is, of course, the work of the censor. The influence of the censor is also to be seen in the tendency to forget one's dreams, which may even extend to the interpretation of them. One may wake up from a dream during the night, interpret it, and fall to sleep again, and find the next morning that both dream and interpretation are forgotten. A fact like this is sufficient to refute Dr. Morton Prince's criticism that the forgetting of dreams is simply a special instance of the forgetting of dissociated states of consciousness. The forgetting is an active process of repression similar to the repression which first drove the wish into the unconscious.

All dreams, without exception, are egoistic. They are the fulfilment of wishes of an entirely selfish nature. In dreams where the dreamer himself does not seem to be present, it will be found that he is represented by some other personage. If several of these are present the ego is to be identified, thinks Freud, with the one who carries the "affect."

Professor Freud has worked out an elaborate psychological system to explain the phenomena of dreams and psychoneuroses, which I deal with more fully in a later section of this paper. Like many other psychologists, he regards the "psychical" as something very much wider than the "conscious." Of the latter he writes: "Consciousness appears to us to be a sort of sense-organ, which perceives a content given from elsewhere" (p. 105). This content, when not illuminated by consciousness, may yet persist as an unconscious psychical process. But Freud makes a new and important contribution to psychological theory in distinguishing between two kinds of unconscious ideas, to which he gives the names "*foreconscious*" and "*unconscious*" respectively. Describing the mind as a sensori-motor system made up of subsidiary systems or "instances" he writes:—

The last of the systems at the motor end we call the *foreconscious*, in order to indicate that the excitation processes taking place within it can rise to consciousness without further hindrance, provided that certain conditions are fulfilled—e.g., the attainment of a certain intensity, a certain distribution of that function which is known as attention, and so forth. It is also the system which holds the key to voluntary movement. The system behind this we call the *unconscious*, because it has no access to consciousness except through the *foreconscious*, during which progress its excitation process necessarily undergoes alteration (p. 362).

Put quite briefly, the distinction would seem to be one between repressed and unrepressed memories. The "unconscious" contains those tendencies experienced, or at least existent, during our past life, especially during the early years of childhood, which have been energetically repressed, and the censor, which is the allegorical name for this repression, is therefore situated between the unconscious and the foreconscious. That is to say, the censor is itself unconscious (or foreconscious), although at the time when the repression of the infantile tendencies first took place it may have been conscious. Freud also inclines to the view that there is some evidence for the existence of a second censor between the foreconscious and the conscious.

Now it is the foreconscious which furnishes the material of the "manifest content" of our dreams, and in it may be found not only wishes, but fears, anxieties, hopes, and all the other conative tendencies displayed by the mind. On the other hand, the unconscious contains wishes, and wishes only. These date from early childhood and are always sexual in nature, since no other wishes would have met with the vigorous repression necessary to drive them into the unconscious. Freud brings forward some interesting arguments in favour of this theory of the fundamental nature of wishing in early life. Unfortunately space does not allow me to discuss them here as they deserve.

The wishes of the adult consciousness, even when repressed, are in Freud's view seldom intense enough to serve single-handed as the motive to the formation of any dream, and in most cases, if not in all, need the coöperation of unconscious infantile wishes. It is these latter which supply the requisite energy, although themselves remaining hidden until revealed by psycho-analysis. They transfer their psychical energy to corresponding elements in the foreconscious and so attain to a vicarious fulfilment. The only wish derived from the foreconscious which is a primary constituent of any dream is the wish to continue sleeping, and this wish is an essential part of every dream. It might perhaps be regarded as an infantile wish which has never been repressed and has never undergone modification in the course of mental development.

(To be concluded.)

ANNUAL REPORT OF THE LONDON COUNTY COUNCIL FOR 1911.¹

(Concluded from p. 1047.)

In a leading article in THE LANCET of March 15th on the Vital Statistics of London we announced the intention of further considering Dr. W. H. Hamer's contribution to this report, only a partial notice of which was then possible.

Typhoid Fever.

Among several matters of medical interest, Dr. Hamer's account of the behaviour of typhoid fever in London is particularly noteworthy. In the course of the last 20 years numerous explosive outbreaks of this disease have occurred in different parts of the metropolis, the cause of which was in most cases traced to infected food. In some instances suspicion seemed to attach to shell-fish, in others to ice-cream, to fried fish, or to watercress.

The present report strikingly illustrates the difficulty of discriminating between one and another suspected food-supply, and is therefore deserving of attentive study. It is reassuring to learn that efforts are now systematically made by local medical officers of health to trace the source of infection wherever typhoid fever attacks are reported. According to the local reports a large number of fever cases appear to have been imported, most of these giving a history of seaside or foreign infection. The difficulty of diagnosis is emphasised in some of the reports, and this difficulty is illustrated by the return of cases certified as typhoid fever and admitted to the hospitals of the Metropolitan Asylums Board. From a table it appears that during the last 10 years the proportion of these cases wrongly diagnosed as typhoid fever has varied annually from 18 to 38 per cent. In the course of the year 1911 nearly one-third of the cases admitted were eventually declared to have been erroneously certified.

Investigation into Typhoid Fever Prevalence in London.

About the middle of September a marked increase of typhoid fever was observed in different parts of London. In Finsbury alone 30 cases were reported in a single week, the number notified in the preceding five weeks having averaged less than 1 per week.

In the annual reports of the medical officer of health of Finsbury for 1910 and 1911 special reference is made to certain localised prevalences of typhoid fever and to possible sources of infection. For example, the suggestion is made that hawkers suffering from incipient typhoid fever while selling watercress or fruit may be a means of spreading infection. A further possibility suggested is the existence of undiscovered carriers of typhoid fever. In considering the exceptional prevalences referred to, question arose as to whether certain cases of typhoid fever occurring in other parts of London may have been due to the same causes as those operative in Finsbury. The matter was therefore referred by Sir Shirley Murphy, then his chief, to Dr. Hamer for special investigation, and his report (which is reprinted in the present volume) was presented to the County Council at the time.

At the outset careful examination was made of the usual media of typhoid infection. Milk, to which, of course, attention was directed, was readily exoperated. The possibility of contamination of water mains was next considered, but the distribution of attacks lent no support to such a hypothesis. The age-constitution of the sufferers in this outbreak was remarkable, children and young adults between the ages of 5 years and 25 being, with few exceptions, the victims. Moreover, the sufferers were exceptional socially. The exclusive selection for attack of persons at certain ages and of a particular social class practically negatived the probability that either water or milk was accountable for the outbreak. On the other hand, the rapidly growing conviction that either fried fish or ice-cream was at fault received further confirmation thereby. Among other articles of food, shell-fish and watercress came under scrutiny, but very few of the sufferers had consumed either of these articles of food; moreover, the mussel season had at that time barely commenced.

In submitting to the Council the results of Dr. Hamer's investigation, Sir Shirley Murphy remarked that "*prima facie* there were some grounds for suspecting that the outbreak might possibly have been due to ice-cream; but an analysis of all the evidence failed to show any other explanation than the consumption of fried fish as the cause of the prevalence." The ground on which ice-cream was at first suspected as a possible source of mischief was the fact that about one-third of the sufferers had purchased ice-cream from one particular vendor. But it was subsequently proved that 35 of the 56 sufferers had not partaken of ice-cream at all. On the other hand, no fewer than 52 of the 56 infected persons had consumed the suspected fish. Moreover, careful study of the age-incidence and topographical distribution of the sufferers, and of the purchasers of fried fish at the particular shop, yielded strong evidence in support of the fish infection theory; and this evidence was further strengthened by the fact that there were numerous instances among families where a single person bought suspected fish and was alone attacked, whilst among families sharing fish in common multiple attacks supervened. It may here be affirmed that the presumption that the whole fish-supply at this period fell under suspicion has never been made in the course of this investigation. Dr. Hamer's report dealt fully with the question of the particular consignment of fish probably at fault, and made it clear that it was only the cheaper portions of fried fish sold to the early evening customers on a particular date in August that could properly be suspected. It is probable that the infected fish was distributed, not in Finsbury alone, but in two other boroughs also. The records of onset of illness pointed to August 17th or 18th as the date of delivery in London of the infected consignments of fish. It is important to note that some of the fish deliveries referred to were from unusual sources, owing to dislocation of traffic caused by a strike. It was stated at the time that on this account trawler owners on the coast found it impossible to dispose of the boat catches at the end of the preceding week. Dr. Hamer draws attention to the important fact, established by the inquiries and reports of officers of the Board of Trade, that much of the small plaice sold at Billingsgate comes from certain "nursery ponds" not far

¹ Previous notices of this report appeared in THE LANCET of March 15th, p. 764, and April 12th, p. 1045.