

cases. Nearly all of us have learned to ban the routine use of hypnotic drugs; yet in some cases they are unquestionably valuable. An unbiased record is needed of such successes and failures. So, too, we have learned that it is usually disastrous to send a patient to employment or amusement in the hope that he may forget all his worries and solve his conflicts by neglecting them. Yet in some cases this treatment is successful. Again, therefore, we require a careful record of the special determinants which should guide our adoption of the policy of sending mentally uncured neurasthenic cases out of hospital for work or golf.

Experience has also shown that a certain class of patient on recovery of the use of a functionally disabled limb regains his normal mentality and is able to throw off all his psychic disturbance. We need a record of the particular class of case in which this treatment is successful. We need to follow up the cases where the psychic disturbances have been thus neglected or where they have been indirectly treated, and to record, not only the speed, but also the permanence of the cure. When the psychic disturbance is allowed to persist behind the scenes, a showy lightning removal of some bodily functional disability is no true cure at all; the same (or some other) disability will later develop on the slightest provocation. In this connexion I would point out how prone the enthusiastic devotees to one special mode of treatment are to self-deception. I have repeatedly had some method demonstrated to me by its advocate, who has said to me: "See what a marked improvement (say) in stammering has been effected by my treatment," whereas to a dispassionate observer the benefit is almost, if not quite, imperceptible.

In my early experience of shell shock I came to lay great stress on disturbances of personality, and I regarded the amnesia and the bodily disorder, mutism, tremor, incoördination, or spasmodic movement, so commonly observed in cases seen soon after their onset, as the expression of this change of personality, due, like it, to some functional dissociation. Accordingly, I adopted the therapeutic principal of restoring the amnesia with or without the aid of hypnosis; and with the restoration of the amnesia came a restoration of the speech and a resumed control of the bodily movement. Brown,¹⁴ who pursued the same method, came to the conclusion that its efficacy was due not so much to the reintegration of the normal personality as to the working off (abreaction) of the repressed emotion. On the other hand, I appeared to produce as good results by discouraging the patient from giving rein to his emotions during treatment. But clearly a series of carefully controlled investigations is required, in which equal numbers of patients are exhorted to restrain and to express their emotions, and the resulting effects compared. Later I began to treat the bodily disabilities first and the mental disturbances after. We have yet to discover which order of treatment should be adopted in different cases.

Electrotherapy and Hypnosis.

Lastly, there remain for consideration and unbiased investigation the debated values of electrotherapy and hypnosis. Each, if improperly used, has its dangers. I have seen vast numbers of stammerers whose condition, I am convinced, has been produced by the alarm they experienced during the electrical treatment of their previous mutism. I have observed similar results from the application of faradism to other functional motor disorders. Yet I should err in recommending that electrotherapy should never be employed. What we need is an inquiry into the special conditions in which it is beneficial and the particular methods which free it most completely from danger.

Perhaps against no method of treatment has there been greater prejudice than against hypnosis. Early in the war I remember the commandant of one military hospital telling me that he would not in any circumstances countenance its employment because the reputation of his unit would suffer thereby. I have read pages of vituperation against hypnosis written during the war by medical men who had had no personal experience of its use. Imagine what would be our attitude towards a physician who wrote in condemnation of a particular drug which he had never tried. There is, however, an instinctive aversion from the practice of hypnosis which seems to justify almost any attack against it. I recognised it for a long time in myself. Hypnotism savours of the

uncanny, mysterious, and unknown. One's first attempts at hypnotism demand even more self-mastery than one's first sight of an operation.

In these circumstances what an urgent need there is for a dispassionate investigation of its merits and defects, of its uses and abuses! It has been claimed that hypnosis makes the patient for ever dependent on the hypnotiser. We may ask, Must it do so, any more than exploration of the mind in the waking state need make him dependent on the explorer? We need to inquire into the different results in this respect arising according to the different modes of hypnotic treatment adopted. It has been urged that hypnotism gives the patient a temporary relief, like a hypnotic drug or a brandy-and-soda. That, again, must depend on the method of its use.

Here, too, we need careful inquiry into the comparative values of hypnosis as a method of mental reintegration (unearthing repressed complexes) and as a method of somatic reintegration (restoring bodily disabilities by direct suggestion). And, above all, we need an inquiry into the subsequent permanence of cure of those patients who have been treated by either of these two methods with and without hypnotism.

Is it too late to hope that systematic inquiry may yet be begun, at least along some of the lines which I have indicated in this paper? Up to now the field has been almost wholly neglected. Far from being barren, it is rich with the possibilities of valuable results.

INCIDENCE OF *ENTAMOEBA HISTOLYTICA*

AND OTHER INTESTINAL PROTOZOA AMONG 400
HEALTHY NEW ENTRIES TO THE ROYAL NAVY.

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THE large amount of work that has been done in connexion with amoebic dysentery during the last three years has opened up a number of questions, not the least interesting of which is to what extent carriers of *Entamoeba histolytica* exist among the civil population in countries with a temperate climate. Some inquiries on this point have already been made in this country, more particularly by the energetic group of workers at the Liverpool School of Tropical Medicine, who have been engaged primarily in the protozoological investigation of the stools of soldiers invalided from the various fronts.

A summary of the results originally published in their earlier papers,^{1,2,3,4} together with more recent data, was presented by Professor Warrington Yorke⁵ before the Society of Tropical Medicine and Hygiene in June, 1918. An instructive table is there given, in which the results of the examination of various classes of civilians and young recruits are compared with those obtained in the course of routine examinations of convalescent soldiers, both dysenteric and non-dysenteric. Among 450 civilian patients in the Liverpool Royal Infirmary it was found that 1.5 per cent. were carriers of *E. histolytica*, while the examination of 246 children under 12 years old in the Liverpool Children's Infirmary revealed 0.8 per cent. "positive."

The incidence among recruits, 18 to 19 years of age, who had been in a training camp for various periods not exceeding three months, was considerably higher (5.2 per cent.). This may be partly accounted for by the fact that there were also in the camp some men who had returned from the Mediterranean area, and from whom the recruits might have acquired their infections. This hypothesis, however, as the author states, would not altogether account for the facts, since it was proved that many of the recruits had almost certainly been infected before going into the camp.

From these results it appears therefore that in some sections of the civil community in England there may be carriers of amoebic dysentery to the extent of from 1 to 5 per cent. of the apparently healthy population. If this is the case, questions naturally arise as to the wisdom or necessity of spending much time and trouble in discovering and attempting to cure such carriers, as has been done to a great extent among the naval and military forces during the war.

On the publication of the statistics above referred to, it was suggested to the Admiralty by Surgeon Captain P. W. Bassett-Smith, C.B., R.N., that the protozoologist at Haslar

¹⁴ THE LANCET, August 17th, 1918, pp. 198, 199.

should undertake an inquiry on similar lines, making use of new entries to the Navy at Portsmouth as a sample of the material from which the Navy is recruited. Accordingly, instructions were given by the Admiralty, and arrangements having been made through Surgeon Lieutenant-Commander P. Fildes, R.N.V.R., in charge of the laboratory at Haslar, with the medical officers of the Royal Naval Barracks, Portsmouth, and one or two other establishments in the neighbourhood, for supplies of material to be sent to the laboratory, the work was begun in July.

I. Material.

Altogether specimens of the stools of 400 men who had just entered the service were examined.

With the exception of a few from the Royal Marine Barracks, Eastney, and a still smaller number from the Royal Marine Barracks, Forton, all these came from the Royal Naval Barracks, Portsmouth.

The new entries at the barracks were attending in daily batches at the sick bay for throat-swabbing, in accordance with the routine for the detection of carriers of the meningococcus. It was found convenient, therefore, to arrange that five of these men daily should be selected at random and specimens of their stools collected and sent to Haslar. The men came from all parts of the country, and this system of random selection was calculated to ensure that the cases examined would not be representative of any one particular district or section of the civil community, but would be a fair sample of the whole.

Owing to the pressure of work on the medical staff at the barracks, and other considerations, it was not found possible to obtain the histories of all cases sent for examination, but it was thought sufficient to make special inquiry as to the history of each case found to be a carrier of *Entamæba histolytica*. A scheme of questions was drawn up, as to whether the man had ever been abroad, his occupation, residence, &c., during civil life, and whether he had ever had symptoms of intestinal disease. These questions were put to each man as occasion arose, and the answers provided the "histories" to be given later.

II. Technique.

As it was desirable to examine a fairly large number of cases, and considerations of time and convenience of arrangement with the barracks had to be taken into account, it was decided to allow only one examination in each case. It was therefore necessary to define, as a standard, exactly what constituted "one examination." In practice, in the routine examination of patients in the hospital, it had been found that the exhaustive inspection of two cover-glass preparations of thin emulsions of each stool was generally sufficient for one examination (i.e., if cysts or amœbæ of *E. histolytica* were present in any given specimen, they would generally be detected by this method, unless the infection was a very slight one). In fact, records were to hand showing that two preparations had been the average number devoted to each first routine examination of new cases for many months at Haslar.

This standard was therefore adopted in dealing with the whole of the 400 new entries; it had the advantage of rendering the results more nearly comparable with those obtained for convalescent dysenterics and other patients examined in the hospital, and these will be given for the sake of comparison, being now published for the first time in full.* It also happens to be identical with the standard adopted for "one examination" by the Liverpool workers, (l, p. 412) and therefore makes the results strictly comparable with theirs, except in so far as the personal element has to be considered.

From each specimen, then, two small drops of emulsion were placed side by side on a slide, and each covered with a cover-glass. As a rule, one emulsion was made in normal saline, the other in Weigert's iodine solution, and the "loopfuls" of fæces were usually taken from different parts of the specimen, to allow for the possibly unequal distribution of the protozoa. The two preparations were then gone over completely under the microscope with the aid of a mechanical stage, using a $\frac{1}{4}$ inch objective and a No. 3 ($\times 8$) ocular. If no protozoa were found, the case was recorded as negative. If any cysts of doubtful nature were found, it was sometimes necessary to make further preparations, but this, of course, does not alter the standard of "one examination."

III. Results.

The results of the investigation may be most conveniently stated in the form of a table. It may be mentioned here that in no case were any active amœbæ found. In all cases

the terms *Entamæba histolytica* and *Entamæba coli* refer to the encysted forms. Table I. shows the incidence of *Entamæba histolytica* and other intestinal protozoa among new entries to the Royal Navy and Marines at Portsmouth. Total number of cases examined = 400. These men came from all parts of the British Isles, and were in no way representative of this district in particular.

(a) Total number of cases found to be infected. (b) Col. (a) as percentage of the cases. (c) Pure infections. (d) Mixed infections.

TABLE I.—400 New Entries. TABLE II.—888 Patients.

Organism.	(a)	(b)	(c)	(d)	(a)	(b)	(c)	(d)
Protozoa of any kind ...	120	30.0	110	10	202†	22.7	179	23
<i>Entamæba histolytica</i> ...	10	2.5	9	1	52	5.9	35	17
<i>Entamæba coli</i> ...	94	23.5	86	8	118	13.3	104	14
<i>Entamæba nana</i> ...	3*	0.75*	1*	2*	—	—	—	—
<i>Giardia</i> [<i>Lambli</i>] <i>intes-</i> <i>tinalis</i> ...	22	5.5	14	8	47	5.3	41	6
<i>Chilomastix</i> [<i>Tetramitus</i>] <i>mes-</i> <i>nili</i> ...	1	0.25	—	1	2	—	1	1
<i>Trichomonas hominis</i> ...	—	—	—	—	2	—	—	2

* The figures for *Entamæba nana* cannot be regarded as trustworthy, as no special effort was made to search for it, and when present in small numbers it may have been frequently overlooked.

† Including 3 cases of *Entamæba nana* (which was only recognised during the latter part of the period covered, and even then probably often overlooked) and 1 case of an amœba of the *limax* type.

Before discussing the significance of these results it will be well to compare them with those derived from the examination of cases in the Royal Naval Hospital, Haslar, between March, 1916, and July, 1918, most of whom were convalescent dysenterics, or were suffering from intestinal disorders of various kinds, and had been serving abroad, many of them in the Mediterranean area. Table II. shows the incidence of the various protozoa among 888 such cases. Account is taken only of first examinations, in order to make the results more comparable with those already given. When further examinations are included, the percentages of "positives," of course, increase with every additional examination.

It has not been possible to classify the cases included in Table II. into men who have and men who have not suffered from dysentery, as the laboratory records do not supply sufficient information as to their history. It should be borne in mind, however, that some of the cases included in the table were at the time of examination actually in an acute phase of amœbic dysentery, or, at all events, were passing active amœbæ. At the first examination free amœbæ were found, either alone or together with the cysts, in nine cases. Subtracting these from the 52 in column (a) in the table, we have only 43 *E. histolytica* carriers, as distinct from actual cases. This brings the percentage 5.9 in column (b) down to 4.8.

Comparing the two tables (I. and II.), therefore, we find that the incidence of the "harmless" protozoa severally—*Entamæba coli*, *Lambli* *intestinalis*, and *Tetramitus mesnili*†—and that of protozoa taken as a whole is actually higher among the "new entries" (more or less representative of the civil population of the British Isles) than among the men who have been in regions where they would presumably be more likely to be exposed to infection; while the presence of *Entamæba histolytica*, though of considerably lower frequency than among the latter, is still about half as frequent. It must be remembered that all the figures probably err on the side of being too low, owing to the small number of examinations of each case, and that they give a totally inadequate idea of the actual incidence of infection. In Section V. an attempt will be made to estimate the probable amount of error in the case of *E. histolytica*, and it may be assumed that at least an equal amount of correction would be necessary in the case of the other protozoa.

IV. Histories of the "New Entry" Cases Positive for *Entamæba histolytica*.

A summary may now be given of the histories, as far as they are known, of the ten cases found to be carriers of *E. histolytica*.

CASE 5.—Age 18; farm labourer; usual place of residence, Fetlar, Shetlands (in a village with 100 inhabitants). States he has always lived at home until entering the Service, working on a small farm. Has never been abroad. Has never had symptoms of intestinal disease.

† *Trichomonas* was not found at all among the new entries.

* A note on the protozoological findings in the first 394 cases examined at Haslar has been published in the Medical Research Committee's Report on Dysentery Cases received from the Eastern Mediterranean. (Special Report Series, No. 6, III., 1917, p. 24.)

CASE 27.—Age 32 years 9 months; plumber; residence, Reading. Had resided at Baroda, India, for three years (February, 1915, to May, 1918), and had had a slight attack of dysentery there in 1917.

CASE 40.—Age 33; schoolmaster; residence, Preston. States he lived in the country in Lancashire until 12 years of age. Has never been abroad. Has had recurrent attacks of diarrhoea at intervals of nine months, lasting three or four days; last attack four months previous to examination.

CASE 44.—Age 21½; fitter and tailor; residence, West Bromwich, Birmingham. Has never been abroad. Has never had symptoms of intestinal disease.

CASE 84.—Age 18; outside porter; residence, East Grinstead, Sussex. Never abroad. Never had symptoms of intestinal disease.

CASE 161.—Age 18; bootmaker; residence, Kettering, Northants. Never abroad. Never had symptoms of intestinal disease.

CASE 211.—Age 18; bricklayer's labourer; residence, Wolverhampton. Never abroad. (This case was admitted at Haslar with "catarrh," developed pneumonia, and died before further information could be obtained. At the post-mortem examination made by Surgeon-Lieutenant S. L. Baker, R.N., nothing abnormal was found in the intestines.)

CASE 374.—Age 38; fireman in Merchant Service; residence, when in England, Rotherhithe. Had been in the service of the Orient Line since 20 years of age. Never had symptoms of intestinal disease.

CASE 389.—Age 19; fisherman; residence, Portstewart, Coleraine, Co. Derry, Ireland. Never abroad. Never had symptoms of intestinal disease.

CASE 393.—Age 27; ticket collector; residence, Queenstown, Co. Cork, Ireland. Never abroad. Never had symptoms of intestinal disease.

The following points of interest may be extracted from the preceding histories. Out of 10 carriers—

(a) Eight had never been out of the British Isles. One had resided abroad (in India) (Case 27). One had travelled extensively in the East (Case 374).

(b) Seven at least had never had symptoms of intestinal disease. (In regard to Case 211 information is lacking.) One had had dysentery (Case 27). One had had recurrent diarrhoea (Case 40).

(c) Five had lived exclusively in England. One had lived exclusively in Scotland. Two had lived exclusively in Ireland.

Out of the eight carriers who had never been abroad only one (so far as is known—*vide* Case 211) had ever had symptoms which might be attributable to his infection with *E. histolytica*.

Age and occupation appear to have no bearing whatever on the incidence of infection.

As far as the small number of cases justifies such a conclusion, infection appears to be pretty evenly distributed within the British Isles.

It is to be observed that two of the cases cannot strictly be considered representative of the population of these islands (Cases 27 and 374). The subtraction of these from the total gives 2, instead of 2.5, as the percentage of incidence (see column (b), Table I). There is reason to believe, however, that the real incidence is much greater, and certainly not less, than 2.5 per cent., as will be seen from the arguments in the following section.

V. Estimation of the Probable Incidence of *E. histolytica* had all Cases received numerous Examinations.

It is well known that infection cannot be detected at every examination, even in cases who occasionally pass very large numbers of cysts. The limitation of examinations to one for each case gives results which are only a fraction of the actual number of carriers probably existing in any given series of cases. Various attempts have been made to calculate the minimum number of examinations necessary in practice, and also to work out the margin of error where the number of examinations is too small.

Dobell,⁶ after much study of the matter, has expressed the opinion [p. 43] that more than three negative examinations must be made on an untreated case before it can reasonably be said to be free from *E. histolytica*, but that it is probable that in three examinations not more than half to two-thirds of the infected cases will be detected. Six examinations are suggested as a minimum in practice.

The Liverpool workers^{1 2} have also studied this question at some length, and their final conclusion is that three examinations will only discover 50 to 57 per cent. of all actually positive cases.

Owing to the regulations regarding "negative examinations" of convalescent dysenterics in the Service, the number of examinations in the Haslar series has always been too small from this point of view. The following figures show the increase in the percentage of positives for *E. histolytica* at each examination as far as the third. The number of cases examined more than three times was so small that it has not been thought worth considering in this connexion.

Out of 888 cases examined at least once, 52 (or 5.9 per cent.) were found positive at the first examination.

Out of 335 cases examined at least twice, and negative at the first examination, 12 (or 3.6 per cent.) were found positive at the second examination.

Out of 164 cases examined at least three times, and negative at the first and second examinations, 3 (or 1.8 per cent.) were found positive at the third examination.

It is calculated, therefore, that if the whole of the 888 cases in the series had been examined twice the percentage of positives found would have increased from 5.9 to 9.5, and if all had been examined three times a still further increase to 11.3 would have taken place.

These figures, as far as they go, are so closely similar to those given for a series of 1713 cases by the Liverpool workers [² Table XI.] that it is assumed that had more examinations been made of the whole Haslar series the percentage of positives would have continued to increase at the same rate for subsequent examinations as in the Liverpool series, and that conclusions based on that series may therefore be applied to the present inquiry.

In the Liverpool series referred to it was calculated that 33.4 per cent. of all cases that would have been found positive in six examinations were discovered at the first examination; and six examinations were calculated to be enough to detect the great majority of infections. It appears, therefore, that if the percentage of positives discovered at the first examination of any series be multiplied by 3 we shall have a moderate estimate of the percentage of positives actually existing in that series.

Applying this rule to the present series of 400 "new entries," where 2 per cent. were actually found positive at the first examination, we find that the real incidence would, in all probability, be not less than 6 per cent. Furthermore, since these men were not selected cases in any way, and were fairly representative, it is believed, of the general adult male population of the British Isles, we have the rather startling conclusion forced upon us that something like 6 per cent. of such a population are carriers of *E. histolytica*, and this figure might be found to be still too low, if a large series of cases were taken and the number of examinations of each were indefinitely increased.

VI. The Pathogenicity of the Cysts.

Granted that some such percentage of carriers as that indicated in the foregoing section exists among the population, it is desirable to find out to what extent they are a danger to themselves or to others with whom they are associated. The data on this subject are unfortunately at present quite inadequate.

It is now recognised that the cat is a suitable animal for laboratory experiments with *E. histolytica*, but it is not always easily infected, and young kittens have been found to be more susceptible than older animals.

It was thought desirable to test the cysts from the new entries from the point of view of pathogenicity, since it was not certain that the strains of the parasite found, though morphologically identical with those from dysenteric patients, possessed the same pathogenic properties. Accordingly two kittens were obtained and kept in readiness, soon after the first few "positives" were recorded. Unfortunately some time elapsed before another positive case was available, and by that time the kittens were almost half-grown, which possibly accounts for the failure of the experiments. The faeces of the two animals were examined from time to time before the infection experiments took place, and no parasites except those normal to cats were detected.

Experiment 1.—On Oct. 29th at 6.30 P.M., each kitten was given 10 c.cm. of an emulsion in normal saline of faeces from Case 374. (The history of this case was not known at the time.) The emulsion was made in the morning of the same day, strained through muslin to remove gross particles, and left standing at room temperature till the evening. It was examined before use to make sure that it contained a fair number of healthy cysts. The injection was given by Dr. Fildes with a 10 c.cm. syringe attached to a No. 8 soft rubber catheter, which was lubricated with glycerine and passed down the oesophagus. The two kittens were kept under observation and their faeces examined daily (with few omissions) until Nov. 15th (17 days from the beginning of the experiment). On one or two occasions there was some diarrhoea, with mucus in the stools, but no amoebae were ever found and none of the signs of acute dysentery were observed.

Experiment 2.—On Nov. 15th, at 6.30 P.M., with the same technique as before, the kittens received injections (given by Dr. Fildes) of two separate emulsions, as follows: Kitten 1 received 10 c.cm. of emulsion from Case 389 containing numerous healthy cysts, the average diameter of which was 8 µ (a very small strain). Kitten 2 received 10 c.cm. of emulsion from Case 393, in which there were many healthy cysts of typical average diameter (13 µ). As in the former experiment, the faeces of both kittens were examined almost daily, until Nov. 29th

in the case of No. 1, and until Nov. 30th in the case of No. 2, and though there were again occasional diarrhoeic stools, with mucus, no serious signs arose and no amœbæ were found.

Kitten 1 was killed (by coal gas) on Nov. 29th and a post-mortem examination failed to reveal any lesions of the mucous membrane of the intestine, or any amœbæ in the contents or in scrapings from the surface. Kitten 2 was similarly killed and examined on Dec. 2nd. No amœbæ were found in the intestinal contents or in scrapings from the mucous membrane. The rectum showed prominent lymphatic nodules, but sections of these revealed nothing of a pathological nature.

It is worth recording that both the kittens were found to be fairly heavily infected with *Lambliæ* (apparently the human species). The cysts were first found in the faces of No. 1 on Nov. 2nd (four days after the first infection experiment) and in the faces of No. 2 on Nov. 20th (five days after the second infection experiment). Cysts of *Lambliæ* had not been observed in any of the human stools used in the experiments, but *Lambliæ* is not known to be a normal parasite of the cat, and it is probable that the infection was artificially produced. The cysts were found repeatedly during the examinations of the faces of the kittens, and numerous active forms of *Lambliæ* were found post mortem in the lower part of the small intestine of each.

The negative result of the experiments as regards *E. histolytica* is probably of little significance. A positive result would have been valuable, but other workers have found that experiments in the infection of cats with cysts per os are often failures, especially when the cats are too old. Dale and Dobell⁷ succeeded in infecting one kitten out of eight in this way, and the Liverpool workers⁴ one out of four. The present experiment, therefore, though negative, must not be taken as an indication that strains of amœbæ from carriers in the British Isles are non-pathogenic. Further evidence on this point is necessary before any statement of this kind can be made.

VII. Summary and Conclusion.

Among 400 healthy new entries to the Royal Navy, freshly joined from places all over the British Isles and examined once each, 10 were found to be carriers of *Entamoeba histolytica*. Of these, 8 had never been out of the British Isles, and 7 at least had never had dysentery. Taking the 8 home cases only, the percentage of infections found at a single examination is 2. This, however, is a minimum figure, and it can be calculated that the real percentage of carriers among the adult male population must be nearer to 6. If this is the case, it may be doubted whether the rigorous treatment of carriers in the Services, who have not themselves suffered from dysentery, is justified or necessary. The percentage of carriers is naturally higher among men who have served in countries where the disease, in its acute form, is endemic, and especially under the conditions of war. But in all probability, given good sanitary conditions, the ordinary carrier is not a serious source of danger to others. The view that he is a source of danger to himself, in that he may at any time develop dysentery or hepatic abscess, remains in any case to be considered, and upon this point the present inquiry offers no evidence.

Experiments on kittens were tried with a view to obtaining evidence of the pathogenicity of the strains of cysts from the "new entries." The fact that the kittens failed to become infected is not, however, regarded as evidence for the non-pathogenicity of such strains.

The writer's thanks are due to Mr. C. C. Dobell, F.R.S., for his kind suggestions as to the general lines of the work, and for some hints on the method to be employed in the infection experiments on kittens; and to Dr. P. Fildes, Surgeon Lieutenant-Commander, R.N.V.R., for the actual performance of those experiments, and for his kind assistance and criticism throughout the work.

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THE ANALYSIS OF A COMPOSITE NEUROSIS.

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As for that wandering ship of the drunken pilot, the mutinous crew and the angry captain, called Human Nature, "fantastical" fits it no less completely than a continental baby's skull cap the stormy infant.—MEREDITH, "The Tragic Comedian."

FROM time to time in the study of the neuroses of war cases are met with which disclose the combination of a war neurosis with another of different order: composite conditions in which the development of a neurasthenia or allied disorder resulting from war strain has taken place in conjunction with a pre-existing neurosis or the rudiment of one.

War neuroses, in common with others we were familiar with before the war, we know to be entities of considerable complexity. These composite neuroses, however, attain a double complexity from the synthesis of two pathologically distinct conditions. From the consequent adjustment of the treatment which this implies it is of the utmost importance, therefore, for the condition to be recognised.

The case about to be described forms an example of such a condition. It was treated at an advanced centre in France, and consequently under difficult and unfavourable conditions. It presents, however, a number of points of considerable interest, not only in the fact of the improvement which resulted from an analysis left by force of circumstances incomplete, but in the illustration it provides of several of the present-day problems of psycho-analysis.

However much the significance of the sexual factor as taught by the Freudian school may be disputed, the value of the psycho-analytic method is becoming more and more widely recognised. In the stimulating nature of the discoveries made by its means and the widening scope for investigation it has suggested, it has inspired the spirit of a sort of renaissance for psychology and psychiatry. One of the chief errors, in my view, of psycho-analyst schools hitherto has been in the mode of presentment of their subject. The results of their very important investigations have been described along lines entirely uncorrelated with the principles of normal psychology. Mechanisms and principles of mental activity have been described with no reference to what was already known on the subject. In consequence it seems that two psychologies have developed—two parallel systems, the psychology of psycho-analysis, and the academic system of the schools.

This may have been inevitable in the beginning. Jung observes that psychology had little to offer to the psychiatrist until Freud's discoveries.¹ But since the publication of "Selected Papers on Hysteria" in 1895, psychology has made very considerable advances, and a correlation between the two is not only to a large extent possible, but urgently desirable.

The process, however, has by certain authorities unfortunately been carried further. A remarkable esoteric phraseology has been evolved which has had the effect not only of obscuring the issues of the subject, but by its semi-mystical colouring has laid it open to the accusation of oneiromancy and superstition.

There is, so far as I am aware, no reason why scientific knowledge should not be expressed in clear and simple language. New mechanisms, new facts as they are brought to light, undoubtedly require new names to label them, but in this case it has been carried beyond the limits of merely technical necessity. Freud remarks: "A clear and unequivocal manner of writing shows us that here the author is in harmony with himself, but where we find a forced and involved expression aiming at more than one target, as appropriately expressed, we can thereby recognise the participation of an unfinished and complicated thought."² In this regard the elaborate and obscure terminology developed by some of the psycho-analyst pioneers raises a suspicion—however wrong it may be—that the obscurity of expression may indicate a corresponding obscurity of conception.

Account of Case.

The present case is similar in many respects to others described in psycho-analytic literature except that it gains a special interest and importance from the fact of the