SEVEN HUNDRED AND FIFTY PSYCHONEUROTICS AND TEN WEEKS' FLY-BOMBING.

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FLY-bombing is not always concentrated, for isolated explosions may occur at any time. There are also numerous if uneventful alerts. Thus there is a state of continuous uncertainty which might be expected to affect psychoneurotics considerably. I therefore set out to investigate the reactions of my patients during approximately ten weeks' concentrated fly-bombing. There were 620 soldiers—9 male officers and 121 auxiliaries—a total of 750 cases, all stationed in the London district. They were referred to me for various psychiatric reasons, by no means on account of anxiety due to bombing; nor was referral on account of fear of bombs necessarily indicative of special apprehension on the part of the patient—in some cases indeed it obviously only indicated anxiety on the part of those making the referral!

All degrees of apprehension of flying bombs were witnessed; as some degree was almost universal I thought it would be most useful to place patients in the following groups:

1. Those who were severely apprehensive.
2. Those who were completely unaffected.
3. A residual group who came between these extremes.

PROCEDURE.

A questionnaire was drawn up designed to elicit symptoms attributable to fly-bombing. Ideally these should not have existed previously, but the practical difficulty is that the symptoms of apprehension do not materially differ from anxiety symptoms due to other causes. I therefore tried by careful questions and reference to available documents to establish that where symptoms were attributed to bombing they had either arisen anew, or that there had been an obvious exacerbation of symptoms previously existent. A list of the symptoms inquired into is shown in Table I.

CRITERIA FOR INCLUSION IN THE VARIOUS GROUPS.

Group I.

The presence of marked (*a*) objective signs or (*b*) one of the last three symptoms shown in Table I, either of which could be taken as indicative of severe anxiety; alternatively the presence of four of the first six milder symptoms. (In fact, of course, if the severe symptoms were present the others usually were too.)

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TABLE I.—*Group I: Frequence of Symptoms Due to Fly-bombs in 55 Severely Apprehensive Cases.*

Milder symptoms.

Poor sleep	82%
Constant apprehension	78%
Poor concentration	78%
Restlessness	69%
Staying in in spare time	62%
Poor appetite	58%

More severe.

Nightmares	32%
Vomiting	24%
Enuresis	6%
Reported inefficient	62%
Reported panicking	52%
Physical signs of anxiety	52%

Group II.

Only cases were included who showed none of the criteria selected as indicative of anxiety in Group I.

Denial of all fear definitely requires substantiation. Lack of affectation in making the denial, failure to refer to the subject of flying bombs spontaneously and lack of devious attempts to secure a distant posting were taken as evidence of veracity. The type of patient who was not included is exemplified by the soldier who had developed headaches, "blackouts" and inexplicable shaking of the legs since coming to London, which he insisted were quite unconnected with bombing, but which he was sure would be improved by a return to his previous posting at Leamington, "where the air suited him better."

Group III.

As stated, this group was arrived at by exclusion.

Particulars of the past personality and the family history were also noted (see Table III), and their incidence in the three groups compared. Group III was not of particular importance in this respect, but as a matter of interest 30 random cases approximately the size of Group II were analysed.

The numerical results were tested by the χ^2 method, and when the chance probability fell below ·05 a significant difference was assumed. Where it existed between two members of a pair of figures in a table each is marked with an "s." The figures in the Tables are expressed as percentages, to make comparison between different sized groups easier.

RESULTS.

The diagnoses of the cases made as far as possible on symptoms already present, irrespective of reactions to bombing, were: Group I, 50 anxiety states and 5 hysterias; Group II, 21 anxiety states and 7 hysterias.

TABLE II.

	Group I. Severely apprehensive.	Group II. Unaffected.
629 men	7·3%	2·3% s
121 women	7·5%	9·0% s
Total 750	7·2%	3·4%

Table I shows the frequency with which various symptoms occurred in Group I. As might be expected, the more severe the symptom the less often it occurs. Table II: It will be noted that a significantly greater number of women were completely unaffected by fly-bombing than were men. Table III: Significant differences exist between Groups I and II for nervousness and timidity, worrying disposition and for "total neurotic traits," i.e. a summation of the symptoms recorded, each of which can be regarded as an expression of psychoneurosis.

TABLE III.

	Group I. Much affected.	Group II. Unaffected. Percentages.	Group III.
Past personality.			
Nervousness and timidity	81 s	50 s	72
Worrying disposition	63 s	42 s	66
Solitary disposition	55	35	42
Obsessional personality	13	18	21
Phobias present	45	24	36
Total "psychoneurotic traits"	320 s	168 s	300
Family History.			
Mother nervous	61 s	35 s	36
Father nervous	36	35	24
Siblings nervous	52	28	30
Total parents and sibs nervous	135 s	200 s	100
Those in past raids	84	76	72
Nervous in past raids	64 s	7 s	42
(? Those in a past "incident"	49	35	45)

A significant difference between nervous mothers of patients in Group I and II existed, and also between the total of parents and siblings in these two groups. The fact that only in regard to mothers and not fathers was the difference significant is probably due to the patient's having been more aware of nervousness in the mother; it is not likely that nervousness is a sex-linked factor. The fact that there is a significant difference between the summative

results is to be explained by the overlapping due to the fact that one patient may have both a parent and a sibling nervous.

Apparently there was no significant difference between the figures of past incidents; by these I refer to having either been in a building which was hit, or been subject to blast, to some form of physical injury without however having been seriously injured. Obviously the severity of the incident is of consequence and the term is very elastic; the validity of these findings is discussed later.

It will be noted that experience of past raids was almost the same in all groups, while reactions in past raids were parallel to present results, i.e. there were significantly less nervous cases in Group II than Group I.

Certain of the past personality traits are, somewhat surprisingly, not significantly different; solitariness is a striking case in point. I had always regarded it as a very important factor in psychoneurosis in the Army generally, for the man who is lonely, unsociable and friendless, who prefers a quiet evening to the public-house, obviously finds Army life far harder than his gregarious comrade.

Phobias differ little in the three groups. I have always regarded the phobic neurotic as nearer to the obsessional—a disorder which Millais Culpin classes as a minor psychosis—and psychoses do not increase noticeably in soldiers in action. This might furnish an explanation of the findings relating to phobias. (I saw a number of psychotics during these ten weeks not included in this series and they were markedly indifferent to the fly-bombs, with the exception of one case of schizophrenia, which showed itself within two days of a bad "incident.")

My term of obsessional personality requires comment. It is nowadays a somwhat abused term, the normally meticulous needlessly apologizing for their methodical ways on the grounds of being obsessional, while the exaggeratedly pedantic use the term as a euphemism to excuse themselves. The term is used here to denote the rigid over-meticulous over-conscientious type; it does not imply the presence of obsessive compulsive symptoms to a morbid degree. (None of these occurred in the whole series; I have seen very few of them throughout the war.) It is noteworthy that obsessional personalities appeared infrequently in my series, but findings based on a rather loosely defined concept of this kind are naturally subject to errors of individual judgment.

Officers.

All the officers were seen during the first month; there was nothing of exceptional interest about them. One was the poor personality who broke down after two nights' bombing; another an excellent officer, aged 48, who had seen much active service, but who after a week of grossly inadequate sleep had become emotional and unable to concentrate; he recovered quickly with a few days' rest. All the rest had symptoms which had resulted from very near misses.

Disposal of Group I Cases.

(Disposals from Groups II and III were unconnected with bombing, and are therefore irrelevant.)

TABLE IV.—*Disposal of Group I Cases.*

Discharged Category E . .	18
Referred to Hospital . .	17
Returned to Unit . . .	20

Discharge was recommended in 18 cases, whose stability was already so precarious that further stress was intolerable. They either showed very severe subjective symptoms and/or physical signs of anxiety and/or behaviour detrimental to unit morale, e.g. one man on a sleeping-out pass actually bicycled 30 miles twice a day merely in order to reach a quiet destination at night.

Hospitalization.—17 cases were referred to hospital either for treatment prior to returning to their units, or for consideration of an annexure posting away from London, or as too bad to return to their units while awaiting a Medical Board.

The types of case selected for treatment were those with a reasonably good past personality, where fear of bombs was not the sole cause, but where personal factors were also present, e.g. an auxiliary had become extremely apprehensive of flying bombs, but only after three near misses, followed shortly by news of her fiancé's death, which obviously had played an important part in aggravating her condition. A soldier who had been through the 1940 raids quite unaffected had recently spent five months nursing a wife dying from carcinoma, and had then found himself entirely unnerved by the advent of the flying bombs.

Return to duty was effected in 20 cases. For these certain simple therapeutic measures were advocated: (*a*) Attention to sleep was essential. More important than hypnotics was to procure a feeling of security, and units were advised to see that the patients slept in maximum safety. (*b*) I also advised patients off duty not to hesitate to take reasonable precautions when danger was imminent. To the bold taking risks is exhilarating; to the timid it is mere bravado. Asking nervous individuals to remain stoically exposed where there is no necessity merely causes additional strain, increases the chances of breakdown, and lessens their ability to carry on in exposed conditions when duty necessitates this. (*c*) I also assured patients that a fear of imminent danger was by no means confined to themselves, and that even if they showed slight manifestations of fear, provided they carried on this was all that was expected. Such reassurance was designed to help overcome the feelings of isolation and self-reproach which often appeared to play almost as large a part in their condition as the actual fear of bombs.

These measures apparently succeeded, for only two patients reappeared who required discharge.

DISCUSSION.

Firstly it must be borne in mind that my classification of patients is open to the errors which inevitably result from a method of recording dependent on accepting the patient's own statements, though I attempted to check them from documents wherever possible.

Next, as this paper is concerned with the reactions of psychoneurotics to fly-bombing, it is necessary to emphasize that the cases in this series were already a psychoneurotic group. It should be stressed that there is no reason to believe that the individuals examined were anything other than a random sample from psychoneurotics in the Army. The reason for this is, (1) that I excluded the very few cases during this period who could not legitimately be regarded as psychoneurotic (e.g. one or two individuals of good personality who had temporarily broken down as a result of some particularly harrowing experience, and at the other extreme, psychotics). (2) When new symptoms or gross exaggeration of old ones clearly due to fly-bombing (see procedure) were excluded, the patients in this series in no way differed from the ordinary run of psychoneurotics who attended my out-patient clinic at any other time.

I would, however, stress that I was dealing with psychoneurotics in khaki; for the soldier derives both advantages and disadvantages through being in the services, which makes his case different from that of a civilian exposed to the same dangers. On the one hand, he has the benefit of being one of a group, but on the other hand he is separated from his home and family, has discipline, guards, night work and other duties which tell hardly on the neurotic.

Moreover, in London many soldiers, certainly the R.A.M.C., were faced with the difficulties arising out of doing what was really civilian work, with no opportunity for aggressive action, and having to concentrate on sedentary tasks with the doodle-bug roaring overhead. I can testify to the difficulty of this; it is not easy to pay adequate attention to the past gyrations of the patient's stomach while trying to ignore the present activities of one's own.

To sum up, this group can legitimately be regarded as an unselected sample of a population of service psychoneurotics, most of whom were engaged in occupations giving no rein to the pugnacious instincts in the face of danger.

To take some of the points in connection with the results for the different groups, Group III requires little comment; it represented the bulk of the patients—91 per cent.—and their reactions corresponded to those of the population generally, i.e. they were intermittently nervous, but their ordinary activities were not affected.

Group I.—Considering these patients were all psychoneurotics, the small number (55, i.e. 7·2 per cent.) who were in Group I, i.e. severely apprehensive, is noteworthy. So is the fact that only 35 of the whole series of patients required discharge or hospitalization.

Group II.—Perhaps more surprising still is the fact that 28 patients (3·7 per cent.) should be as far as one could elicit entirely unaffected by the fly-bombs. Further, these patients, as already pointed out, had also been very little affected by the original raids—which is either confirmation of these findings, or evidence that I had been deceived on both scores twice in my case-taking.

Some case-histories might be of interest at this juncture to illustrate the contrast between the patient's marked psychoneurotic symptoms and the small effect of bombing. The first case which comes to mind is that of an officer who had come to consult me about irritability, breathlessness and

intense sweating, symptoms which caused him a great deal of concern. During the interview a bell tolled, which was the somewhat doleful local warning of imminent danger, and I suggested that we should pursue the usual course of going into the corridor to get away from glass. The reply of the patient, whom I should have regarded as a definitely timid personality, was to say, with a charming smile, " By all means if you are worried."

Another patient, who had six close psychotic relatives, who was inclined to worry, whose manner was definitely schizoid, confessed a little shamefacedly that he actually found that raids stimulated him.

An obsessional over-conscientious, strictly disciplinarian sergeant, with severe functional headaches, had a flying bomb drop extremely close without being in any way affected. Another sergeant who suffered from night terrors and shouting in his sleep, and who once, as a youth, had fainted at the sight of blood, told how he had been through many London raids and seen many casualties without undue perturbation, had a very near miss from a flying bomb, but had no consciousness of feeling afraid of subsequent ones, and there was nothing to suggest he was.

I could multiply such examples, but I will conclude with the interesting history of an auxiliary who had recurrent attacks of a severe phobia of crowds which caused her acute suffering, and made life in the A.T.S. almost unendurable at times. Quite by chance I discovered that she had been on duty on a gun site which had been hit by a flying bomb three days previously. The incident had apparently made so little impression on her that I only discovered it through a passing reference on her part. Even after mentioning it I found it difficult to get her to attend to a matter which seemed so trivial to her compared to her fear of crowds.

It is difficult to offer a satisfactory explanation of these incongruities. As I stated earlier, psychotics are little affected by external events, and it is possible that the more psychoneurosis is determined by endogenous events, such as mental conflicts, the less the patient is prone to anxiety as a reaction to events in the outside world.

Finally the difference between the " unaffected " men and women is equally difficult to explain except by invoking the magic word " constitution." The difference in response to bombing in Groups I and II is presumably explicable on the same lines, being on the grounds of difference in past and family history ; this is in keeping with most findings in this war and the last. However, a word of warning is needed that though constitution may be the fundamental determinant, experiences undergone by the patient are important precipitants. Maclay and Whitby (1941) show that the nearer the bomb the greater the after-effect. I found mild concussion appeared to interfere with the regression of anxiety in previously stable individuals (1942) ; hence in any given case due allowance must be made for experiences undergone by the patient, as well as constitution ; a matter of some practical moment in assessing attributability. I attempted to compare the number of incidents experienced by patients in the various groups in this inquiry ; the results showed about an equal number in each group. I tried to establish criteria so that the incidents would be comparable, but it was extremely difficult to do so satisfactorily, and as the results

were so at variance with clinical experience I am inclined to dismiss them as not accurate.

Morale.—In psychoneuroses resulting from enemy action there are two factors: (1) Somatic disturbances producing the unpleasant sensations of fear and inhibition to function ranging from inability to concentrate to being paralysed by fright; and (2) the individual's adaptation to these. The former are largely out of the individual's control, but as a colleague of mine suggested, a person of good morale might not be able to think clearly or act usefully, but would nevertheless remain at his post.

The psychoneurotic might be expected to have difficulties on all counts, for being intrinsically hypersensitive, he tends to over-react somatically, hence experiencing excessive anxiety, and consequently having a tendency to depression with fatigue. Hence in adapting he is actually called upon to overcome greater difficulties than the normal, and this should be borne in mind in judging his reactions. In my series of patients it is noteworthy that only six who could reasonably have been expected to carry on insisted they could not "stick it," and that only 35 out of 750 patients had to be taken off duty—findings which redound to the credit of a class of patients who are not the recipients of many bouquets! Naturally a number of others expressed the desire to leave London, but even the mental defectives, when appealed to, saw the necessity for remaining at their posts.

Summary and Conclusions.

750 psychoneurotics stationed in London district during 10 weeks' fly-bombing were studied and fell into three groups:

(1) 55 who were seriously apprehensive.
(2) 28 who were quite unaffected.
(3) 667 who were moderately so.

Only 18 patients needed discharge, and 17 hospitalization on account of bombing. A significantly greater number of women were completely unaffected than men and significantly more neurotic traits occurred in the past and family history in Groups I and II.

Therefore, as only 7·2 per cent. of psychoneurotics were made seriously apprehensive by 10 weeks fly-bombing, it clearly had little effect on the group as a whole.

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