NEW FACTS AND OLD MISCONCEPTIONS ABOUT NEUROSES*

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THE FACTS

The new facts about the neuroses that I wish to present are of two inter-related kinds—experimental and clinical. In the perspective given by these new facts several popular notions will be seen to be misconceptions.

Many medical men are still unaware of the fact that neurotic states can be produced experimentally. Yet, since Pavlov[5] reported the first instance of experimental neurosis in a dog, nearly half a century ago, neuroses have been produced by numerous experimenters in many different species ranging from pigeons to chimpanzees and even human beings.

About 8 years ago I performed a series of experiments on cats on the production and therapy of neuroses.[7, 8] A very significant finding was that a neurotic state could be produced merely by subjecting an animal confined in a small cage to an uncomfortable but non-damaging electric shock. At the time of being shocked the animals displayed anxious behaviour such as howling, muscular tenseness, mydriasis and tachypnoea. This behaviour was subsequently reproduced whenever the animal was

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brought back into the experimental cage even after many months, although the animal was never again shocked. The anxiety was also manifested in the experimental room outside the experimental cage, and in varying degrees in certain other rooms according to their degree of resemblance to the experimental room. It was concluded that experimental neuroses are essentially conditioned anxiety-reactions of high intensity.

The anxiety reactions of our animals were regularly overcome in the following manner. In the experimental cage where the shocks had been administered the animal would on all future occasions have so much anxiety that he would refuse to eat meat pellets dropped in front of him even if he had been starved for two or three days previously. But if attempts were now made to feed him in the other rooms resembling the experimental room, some room would be found where the anxiety would not be great enough to inhibit feeding. If the animal was repeatedly fed in this room, it was found that he ate with increasing readiness there and thereafter began also to eat in a room more closely resembling the experimental room. Progress was made from room to room until the animal would eat in the experimental room and at last in the experimental cage, eventually showing no trace of anxiety there.

Immediately preceding the neurosis-producing shocks a buzzer or other auditory stimulus had been presented. This had thus also become conditioned to evoke anxiety responses, and continued to do so even after the animal had ceased to respond with anxiety to the visual and olfactory stimuli. By a procedure of gradual approaches analogous to that used for the visual stimuli the anxiety-evoking effect of the auditory stimulus was also gradually eliminated.

These findings led to the general hypothesis[8, 9, 12] that if a response incompatible with anxiety can be made to occur in the presence of anxiety-evoking stimuli it will weaken the bond between these stimuli and the anxiety responses. This hypothesis of reciprocal inhibition as the usual basis of psychotherapeutic effects has been directly confirmed clinically by the use of the following responses that are antagonistic to anxiety—assertive responses, sexual responses, and relaxation. There is reason to believe that respiratory and musculoskeletal responses are under certain conditions also antagonistic to anxiety.[11]

The hypothesis is most conveniently illustrated by a method employing relaxation responses. The patient is given preliminary training in relaxation by Jacobson's method.[2] Meanwhile an 'anxiety hierarchy' is constructed. This is a list of stimuli to which the patient reacts with unadaptive anxiety. The items are arranged according to the amount of disturbance they cause, the most disturbing items being placed at the top and the least disturbing at the bottom. The patient is hypnotized and made to relax as deeply as possible. Then he is told to imagine the weakest item in the anxiety hierarchy—the smallest 'dose' of phobic stimulus. If the relaxation is unimpaired by this a slightly greater 'dose' is presented. The 'dosage' is gradually increased from session to session, until at last the phobic stimulus can be presented at maximum intensity without impairing the calm, relaxed state. It will then be found that the patient has ceased to react with his previous anxiety in encounters in real life with even the strongest of the once phobic stimuli. The following specimen list shows two hierarchical series of anxiety-evoking stimuli (in descending order) obtained from a single patient:

A
1. Human injuries with a good deal of bleeding.
2. A clothed dead body.
3. A dead body completely enshrouded.
4. Slight bleeding from own child's minor wound.
5. At a burial.
6. A severe bloodless injury, e.g. large wound, fracture.
7. Inside a cemetery.
8. Seeing a funeral procession.

B
1. Speaking among strangers.
2. Being focus of attention in group of 6 or more acquaintances.
3. Being alone with one woman: (*a*) stranger, (*b*) acquaintance.
4. Being alone, with 2 or more women: (*a*) strangers, (*b*) acquaintances.

It should be noted that the items in list A are not homogeneous, and could be separated into 2 series—a death series and a trauma series; but they do have an obvious common core, and the reactions they evoked in the patient had the same feeling-quality. When these lists were worked through systematically in the manner described above, the patient became free from any anxiety reaction when he encountered in real life any of the stimuli listed.

The results of treatment of 122 cases by de-conditioning on this principle of reciprocal inhibition were published a short time ago,[11] an earlier report on the first 70 cases having appeared in this Journal.[10] Using as an index Knight's 5 criteria[3]—symptomatic improvement, increased productiveness, improved adjustment and pleasure in sex, improved interpersonal relationships, and ability to handle ordinary psychological conflicts and reality stresses—it was found that 110 cases (90%) had been either apparently cured or much improved after an average of about 25 interviews. This compares strikingly with the 50–60% of successes obtained in most other series, including psycho-analytic series. Reasons were given[11] for believing that all of these other series also owed such successes as they obtained to reciprocal inhibition of anxiety responses, due to the non-specific emotional responses that are evoked in patients by *any* kind of 'psychotherapeutic' interview. If the relatively favourable results of the reciprocal inhibition series are, to the extent of 60%, regarded as also due to non-specific emotional arousal, the additional 30% of good results may be attributed to the use of special measures to obtain reciprocal inhibition of anxiety.

THE MISCONCEPTIONS

It is clear from the foregoing that neuroses are basically conditioned anxiety-reactions. Their arousal is automatic once they have been conditioned, and they persist until the conditioning has been overcome by relevant emotional retraining procedures. Armed with this meaningful and clear conception, we are able to see clearly the erroneousness of many popular notions about neurotic states. We may group these notions under

3 headings—(*a*) misconceptions about the nature of neuroses, (*b*) misconceptions about the approach to the patient, and (*c*) misconceptions about therapy.

Misconceptions regarding the nature of neurosis

Probably the most widespread misconception under this heading is that neuroses are purposive—that a person either deliberately or unconsciously adopts a neurosis because it subserves some aim, usually that of enabling him to evade his problems. Now, as we saw that neuroses can be understood in terms of cause and effect, to invoke an additional concept like purpose is superfluous, just as it would be superfluous to invoke the intervention of angels to explain how apples fall to earth when dropped.

Another false idea regarding the nature of neuroses is that they constitute a state that is somewhere between normality and psychosis. This is untenable because neuroses are a matter of conditioning (i.e. learning)[12] whereas psychoses are apparently due to biochemical and other physiological abnormalities. I personally have never seen a neurosis turn into a psychosis, and Eysenck[1] has recently shown in a statistical study that neuroses and psychoses do not belong to the same continuum.

Misconceptions regarding the approach to the patient

There are two common misconceptions that fall under this heading. The first of these is still cherished by a good many doctors. It is that the neurotic is really not ill but just misbehaving, and that once it is certain that there is no organic disease the patient can safely be forgotten (except for a bottle of sedative when he is a nuisance). Yet neurotic suffering is particularly unpleasant to endure, and patients frequently say that they would prefer even severe pain from organic disease. Like all other conditioned responses neurotic responses are automatic and not produced by the patient's free will.

The other ill-conceived approach to the neurotic patient has something in common with the foregoing. The doctor assumes that the patient's troubles are all due to his concealment of unpleasant facts. Consequently the interview situation acquires the character of a battle of wits between the doctor and the patient or the patient's so-called 'unconscious mind'.

Misconceptions about therapy

Misconceptions about therapy of the neuroses are very numerous. Now, fortunately, even the therapist with the most erroneous ideas can expect to achieve a substantial percentage of successes because, as I pointed out earlier, there are non-specific emotional effects of interviews that lead to de-conditioning of neurotic responses, no matter on what theory the interview is conducted. But the erroneous ideas are none the less undesirable and should be exposed. Here are some of them:

1. *'Time heals'*. This notion is untrue if taken literally, yet contains a germ of practical truth. The mere passage of time does not affect neurotic or, for that matter, other conditioned responses, yet sometimes a patient improves with time just because chance provides circumstances which permit reciprocal inhibition of the neurotic responses to occur.

2. *'Talking it out'*. Another wrong idea that also often leads to successful therapy is that by 'talking it out' a patient may purge himself of his neurosis. Neurotic reactions do not fly out on the wings of the words by which the patient describes his troubles, but sometimes, if he is lucky, in the course of his description the anxieties aroused may be reciprocally inhibited by other emotions that arise from the therapeutic situation itself.

3. *'Show him how absurd his neurosis is'*. In this approach the doctor proves to the patient by logic that his fears are baseless and therefore shouldn't exist. The patient accepts this intellectually (and in fact may have been aware of it already) but usually his fears continue. It is not to be expected that emotional responses whose conditioning involves automatic subcortical centres will be much affected by changes in the patient's intellectual content.

4. *Moralistic injunctions*. Some doctors have the idea that a neurosis is essentially due to a lack of a mystical entity called 'moral fibre'. Therapy accordingly consists of 'pepping up the patient'. This is attempted sometimes by means of a bluff manner, but more often by means of moralistic injunctions of which the following are popular examples—'You must face up to your troubles', 'Only you can help yourself', 'Pull yourself together, man', 'Do you realize how unfair to your family your behaviour is'. Such moralizings can never have the slightest beneficial effect on the conditionings that underlie a neurosis. On the contrary they sometimes make the patient worse through giving him feelings of guilt and inadequacy, especially if he has been frantically trying to follow the meaningless advice to 'pull himself together'.

5. *Repression-lifting*. The notion that the lifting of repressions is the essence of psychotherapy is probably the most serious of all therapeutic misconceptions, because it is held by many sophisticated therapists. The peculiarly persuasive way Freud had of presenting a case even when it was not backed by scientific proof is the main reason for this state of affairs. Yet, typical statistical studies[4, 6] show that psycho-analytic methods do not even achieve results superior to those of ordinary hospital practice (because both depend on the non-specific anxiety-inhibiting emotional effects of interviews).

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