THE SUSPENDED REVOLUTION

Chapter 5 THE DYNAMICS OF A PSYCHOSIS

Lovers and madmen have such seething brains,
Such shaping fantasies, that apprehend
More than cool reason ever comprehends.
One sees more devils than vast Hell can hold:
That is the madman. The lover, also frantic
Sees Helen's beauty in a brow of Egypt.
Such tricks hath strong imagination,
That if it would but apprehend some joy,
It comprehends the bringer of that joy.
How in the night imagining some fear,
How easy is a bush supposed a bear!

A Midsummer's Night Dream

I have been arguing that individuals who are supposed to be mentally ill are not suffering from any mental or even psychological disorder but rather have a neuropsychological disturbance. That they remain capable of being rational and empirical and that the best hope for treatment of their condition would seek to exploit their rationality and empiricism. A moment's pause for thought however should suggest that one of the characteristics of the so-called insane, in contrast to the picture just painted, is that they are at least on occasion insane. This is not a judgement that many depressed, manic or schizophrenic subjects would argue with as almost all on some occasion will have thought they were going mad. Can these pictures of empirical and insane patients be reconciled?

There are two ways to appear insane/eccentric, which apply equally to Newtonian planets and to people. One is to have a genuinely eccentric orbit. And the other is to appear eccentric because of the influence of some other agency. Thus it was that eccentricities in the orbit of Neptune led to speculation about the existence of Pluto. Recently anomalies in the electromagnetic radiation arriving at earth have generated interest in the possibility of locating black holes by working backwards from these anomalies.

In this chapter it will be argued that the neuropsychological disturbances at the core of the affective disorders and schizophrenia provide a disturbing external force. One that arises from within. In response to it, judgements about what has happened are dominated by uncertainty as to what will happen next. Where will this new orbit take us? What lies in our path? What correcting action should be taken if we know neither the consequences of this change in orbit or the likely effects of any compensatory manoeuvres? Dynamic psychology is now in a position to answer how we are likely to respond to problems such as these. Along with the growth of neuropsychology, one of the newly flourishing areas of psychology has been the assessment of risk- taking behaviour and of the factors that shape judgements made under uncertainty (1).

Three developments catalyzed growth in this field. Firstly, there was the recognition, by Paul Meehl in the 1950s, that clinicians, faced with the need to offer prognoses for clinical conditions, make predictions that differ radically from the predictions that would be made based simply on statistical considerations. For example, take a psychiatrist who has examined a number of subjects who have just been admitted with schizophrenia and who is asked to predict the likelihood of recovery of the patients in question. Outcome studies repeatedly give the outcome for schizophrenia as 33% fully recover, 33% partially recover and 33% fail to recover. But psychiatrists faced with particular patients will not give such neutral probabilistic answers. They are more likely to to be pretty confident that particular patients will either do well or poorly. If asked why so confident about outcome, the answer is likely to be in terms of an intuition or a hunch, although an appeal may be made to other factors known to influence outcome, such as premorbid social functioning.

This mode of operating differs little from that of the gambler, who feels sure they have a "system" that will defy the odds. Commonly clinicians (or others) subjected to such experiments, even when they feel they have done a good job at predicting, get the actual outcomes badly wrong. The surprising thing is that feedback seems to be of very little use in helping to correct and improve performances. It seems that knowing something about an area doesn't stop us thinking we have "personal" insights that will take our performance beyond the average.

Another input came from the study of subjective probability and the introduction of the Bayesian paradigm to psychology by Edwards. This highlighted the distinction between the probability that refers to what the world is probably like and the probability that refers to how probable things

seem to us the knowers. Changing the latter kind of probability estimates involves not just demonstrating certain facts about the world but also overcoming sets of beliefs or hunches the subject may have. Thus, experiments that demonstrate that 95% of the outcomes appear inconsistent with a particular hypothesis may not lead the subject to rationally reject that hypothesis if it involves important beliefs for them. This is because these beliefs are supported, at least indirectly, by other evidence.

For example, the weight of evidence that smoking causes cancer commonly does not lead people - even medical people - to give up smoking. Why not? Because the evidence presented is not the only evidence on the subject that a typical person has. They may have a grandparent who lived to be a hundred and smoked 40 cigarettes daily. Or they may associate smoking with being virile and being virile with longevity. For the subjective estimate of probability to change, a whole set of beliefs must change rather than just my knowledge of what studies on smoking have shown. Conversely beliefs only shakily supported by the evidence are taken up enthusiastically rather than cautiously by subjects who have other beliefs congruent with the ones in question. This applies to scientists and lovers as much as to madmen and gamblers.

The third influence on recent dynamic psychology came from attribution theory, first developed by Heider. According to attribution theory when things happen, and in particular when they happen to us, we must come up with answers as to what is happening and why. There are certain answers we seem prone to, it could be argued almost evolutionarily predisposed to. Chief among these is our propensity to attribute causal agency to dispositions rather than to situations. This has been termed the fundamental attributional error.

These three inputs combined have led to the study of man, the "lay psychologist". And it has become clear that in daily life, we normally are not particularly rational, in the sense of estimating statistically valid probabilities. Indeed, it would appear that we use some very simple predictive strategies and on many occasions use them to our detriment. These have been called heuristic strategies or biases.

The hypotheses and concepts we derive from such strategies, however, are often ones we do not easily give up. They appear capable of surviving potent logical and empirical challenges. Experiments suggest that they can even be bolstered by contrary evidence or the total destruction of the evidential bases on which the belief was founded (2). Such studies have shed much light on the generation of social prejudice. They would seem to have an obvious relevance also to the question of the origin of delusional beliefs - which is the central question in the psycho- pathology of the psychoses.

Bias of Representativeness:
This bias refers to our liability to be over-influenced by individual items of information or our familiarity with certain situations to the neglect of a balanced view of the whole scene. Thus given descriptions of a person's personality as shy, retiring, bookish and asked to judge whether the person involved is a nurse or a librarian, most people plump for the librarian label. Despite the fact that there are far more nurses than librarians. Even when provided with the information that the personality profile was selected from a group of ten profiles 8 of which were nurses and 2 librarians, experimental subjects defy the odds. It seems we assign an occupational label to the personality profile based on our intuitions of what nurses and librarians should look like. We feel more confident with stereotypes than with a rational analysis of the probabilities of a situation.

This thinking by stereotypes happens all the time in daily life. Given some ethnic or social group we dislike for some reason, we are likely to seize on a press story featuring a member of that group engaged in unseemly behaviour as evidence for the unsavoury nature of all members of the group. No matter how large the group or improbable the likelihood that so many people could be so perverted or uncivilised. Single examples of crazy people are frequently enough to tar all sufferers from mental illness with the same brush - they're all unstable and liable to violence.

This bias is also shown in the case of our beliefs regarding things that may help our physical or nervous ailments. Thus many people take herbal preparations or old country remedies on the basis of a confident assurance by a friend or neighbour that it did wonders for someone else they knew. We often believe more in this wondrous cure of one than in the many cured by more orthodox treatments. This form of thinking does not only affect lay people. Many psychiatrists have their favourite antidepressant for example, often based on one dramatic response to the drug in question, despite the weight of evidence that all antidepressants are about equally efficacious. Many psychotherapists are similarly convinced of the efficacy of their brand of psychotherapy based on a handful of dramatic cures. The point behind all these examples is that one dramatic example is likely to speak louder than a large number of unremarkable examples.

We are also quite likely to draw exactly the wrong lessons from experience, based on this preference for dramatic examples and stereotypes rather than a balanced view of the overall picture. Kahneman & Tversky provide a good example of a flying school and flight instructor. If the instructor praises a particularly good landing, what is the likely outcome going to be? Well in the nature of things, exceptionally good performances are followed by performances that are not so good. Both instructor and pupils may draw from this the lesson that praise for good performances is a bad idea. Equally both may be readily convinced of the usefulness of bawling out poor performances.

In both cases such instinctive responses would be wrong, as all that is happening is that by the law of averages two exceptional performances are unlikely to succeed each other. Failure to take this into account may lead to beliefs that the human condition is such that you will get the best out of people by being hard on them or that rewarding people for good performances will lead to disappointment. This line of thinking can get even more destructive if you begin to speculate on their motives for disappointing you.

Bias of Availability

Another bias stems from the availability of pertinent examples in our own experience. In general, we appear to estimate the frequency of particular events or conditions by the ease with which examples come to mind. Thus if one comes from a family in which there have been a number of people treated for heart attacks or mental illnesses, one is likely to overestimate the risk to oneself of having a heart attack or becoming mentally ill and also the incidence of these conditions in the population at large. We all tend to think that common things in our own experience are common generally. This kind of thinking can be seen in the case of a depressed person, who has a number of relatives that committed suicide. The expectation that the current sufferer will go the same way may be overwhelming on the part of both the subject and surviving relatives. This expectation may in a real sense be self-fulfilling.

In the case of our health, it is current levels of performance that are most readily available and most likely to influence us. For someone who is depressed, current poor performances typically outweigh the evidence of a lifetime of solid achievement. In manic states present levels of energy and drive are often expected to last forever, despite the evidence that several weeks previously it may have been hard to get out of bed. In schizophrenic states current bizarre experiences are

likely to lead to the conclusion that the world is a dark and shady place despite all previous assessments to the contrary. However, it is not just the depressed, manic or schizophrenic person who makes this mistake. All too often those who are involved in the care of depressed subjects are misled by the patient saying that their marriage is terrible. For the patient, this judgement comes from the current strains being experienced but one would imagine that therapists would be able to stand back and assess the overall picture. Unfortunately, faced with one strained interview involving both partners, in my experience they all too readily seem to take that as indicative of the entire marriage.

Drawing conclusions about themselves, their relationships and life that are influenced heavily by current problems, schizophrenic, depressed or manic subjects often arrive at answers that are inconsistent with their past. When this happens, the original assessment of the past is often revised. Thus what formerly would have been described as a happy or unremarkable childhood becomes an unhappy one. An average marriage, in retrospect seems flawed from the start. This is termed retrospective falsification. But far from being the point at which insanity enters into the picture, such rewriting of the past is consistent with good scientific practice. If a new view becomes dominant all the evidence that it explains suddenly gets noticed. Equally, awkward pieces of evidence not easily reconciled with the dominant view, somehow seem to slip out of sight.

This rewriting of history is based on the need to maintain consistency. Whatever about the past, there is no doubt about current poor performances. The past, therefore, must also have been less adequate than one might have thought. On reviewing it, both patients and therapists all too easily find it possible to come up with evidence that can be used to support the new version of history.

While this may be regrettable and is unrealistic in the sense of not being probable, it is not insane. Plausible stories are created. And plausible stories rather than scientific accuracy are all that most of us need to get by. However, thinking this way and spinning stories, that are at least as consistent with the evidence as the myths that keep most of us going, is not allowed the "mentally ill". Thinking this way, we will argue, is precisely what leads to diagnoses of insanity.

Illness Behaviour

These heuristic biases apply to situations where we are called upon to make judgements when in possession of an incomplete set of facts. Falling ill is such a situation. In the case of the regularly occurring minor aches and pains, the thousand natural shocks that flesh is heir to, we may not heed too much if they occurred before and proved to be inconsequential. Even so if we can explain them we will.

This need of ours to get a grip on uncertainty shows up clearly in drug trials that involve placebos. It is the common experience of many researchers involved in such trials that a number of patients have to be withdrawn from research projects because of severe side effects. Both patient and researcher may be convinced the new drug is responsible for the effects reported. However, when the double-blind coding is cracked, it frequently turns out that the patient was on a placebo. What is happening? A simple explanation would be that in the normal course of events during the period on the placebo, some unusual physical sensations, discomforts or changes would have occurred. These, or similar anomalies, may have been suffered or endured in the past or they may have led to an appointment with the doctor and by the time of the appointment may have cleared up. However, in the new situation of trying out an unknown compound, the obvious temptation is to leap to the conclusion that this must account for what would be otherwise inexplicable.

The concept of illness behaviour was recently developed by David Mechanic to account for just such behaviours (3). A typical population for which it was described were medical students. An averagely rational group. It seems, however, that medical students become more hypochondriac than the average, when they start doing pathology. This is the subject that exposes them for the first time to illnesses and their symptoms. At this time, they usually also start seeing real patients and illnesses such as multiple sclerosis. What is happening? Like any other group it can be hypothesised that they have aches and pains. But unlike others they have a fund of recently acquired dramatic stereotypes to choose from, when faced with the need to determine the significance of what is happening them. They develop "illnesses". Multiple sclerosis is particularly common. It has the advantage of frequently presenting with a seeming innocuous ache or pain or episode of blurred vision. The consequences of these innocuous presentations, however, are dramatically horrifying.

While illness behaviour can occur in the absence of an illness, as the multiple sclerosis example indicates, it is particularly likely if there is some real but vague or indeterminate disturbance. In the case of broken legs or heart attacks, it is usually clear early on what is happening. Thereafter there are only a limited number of rational responses. But the opposite is true in less clearcut cases. The less clear cut the case the more the scope for, or necessity for, individual ingenuity to come up with the rational answer to what is happening - where rational implies the answer that best squares with the facts, or to which the facts can be squared.

A range of behaviours may cluster around an illness. In contrast to the illness behaviour that can exist in the absence of an illness, there is also the illness behaviour that consists of an inappropriate lack of illness behaviour. Some subjects on being informed that they are ill, respond with a complete denial of the illness and its implications. Other behaviours may involve catastrophic reactions or frankly hysterical reactions. While we have suggested that illness behaviours are most likely to be unduly prominent parts of the clinical picture in cases where the core disturbance is vague and indeterminate, brief episodes of "lunacy" can also occur in clearcut illnesses such as broken legs (4). As Dennis Potter remarked in The Singing Detective "when you lose your health, the entire medical profession takes it as axiomatic that you have also lost your mind".

In all these cases, however, nothing need be presumed wrong with the brains of subjects behaving oddly. These reactions are the normal reactions of subjects with a physical illness and accordingly an uncertain future. They also occur in subjects with brain illnesses, such as Parkinson's disease or brain tumours. This being the case they can also be expected to happen in the case of the affective disorders and schizophrenia - especially if these illnesses, as we have been arguing, have a physical core. This means that these illnesses should on inspection show signs of brain dysfunction and signs of normal psychological reactions. However as both brain dysfunction and psychological reactions give rise to altered behaviour, the disentangling of illness behaviours from illnesses in these cases can be expected to be more complicated than in other branches of medicine. Even something such as the response to pills will not help us tease these elements apart in any foolproof way as both sets of behaviour can be expected to clear up - if the pills cure the core disturbance.

Fundamental Attributional Error

The greater part of the affective disorders and schizophrenia involve illness behaviours, clustering around a core neuropsychological disturbance. But there is one further bias that is particularly likely in the case of these illnesses, that makes their illness behaviours quite different to those of other illnesses. This stems from what has been called the fundamental attributional error, which we have touched on, when we distinguished between reasons and causes in chapter 4. It involves

attributing to persons and their dispositions what is better explained by situational factors. That is when trying to work out what has happened or why it has happened, we are more likely to think that the people involved in a situation influenced the outcome more than any characteristics of the situation. We look for the reasons rather than the causes.

Experiments such as the following indicate what is involved. A group of persons may be split up into three - questioners, answerers and observers. The task of the questioners is to think up general knowledge questions for the answerers to answer. The task for the observers is to rate the levels of intelligence or general knowledge held by the questioners and the answerers. What is surprising about these experiments is that both observers and answerers end up rating the questioners as extremely intelligent and widely versed in general knowledge. Even though both groups know that the questioners have had the advantage of making up whatever questions they liked. The answerers end up rating themselves as of less than average intelligence and general knowledge.

Situations like this are similar to therapist-patient interviews. The therapist sets the questions and determines what the correct answers are. Inevitably, simply by virtue of training and situation the therapist will know a lot of relevant information that the patient won't know. However, the conclusion drawn by both sides, typically, is that there is something more than situational factors involved. That the therapist is dispositionally superior to the patient. That they are more psychologically integrated than the patient and less liable to human failings.

This rather than the mysterious action from a distance, exerted by a buried Oedipal complex, can explain why patients tend to fall in love with their therapist. Particularly if they are of the opposite sex. In actual fact, both patient and therapist are making the commonest mistake of normal thinking, attributing to personal qualities in each what is much better explained as a function of the situation, in which two people find themselves. A similar dynamic comes into play, when the therapist then goes to visit a lawyer or bank manager, except that the roles are reversed. However, Oedipal complexes are rarely invoked to account to the interpersonal dynamics occurring in such situations.

Why make such attributional errors? The answer is that common sense biases us this way. We are all necessarily on the lookout for trouble. If there are no earthquakes, volcanoes, plagues or wars happening or threatened, experience has taught us that the most likely source of trouble is other people or ourselves. If the external situation looks stable and if we are not physically sick, but nevertheless things aren't going right we look for the person responsible. This is a good bet. It is common sense. However we appear to credit others with too much trouble-making potential, to the neglect of the intrinsic difficulties of situations. For example, we routinely attribute social messes to the evil machinations of politicians rather than to the technical difficulties of organising and catering for millions of people. The definitive example of this bias lies in the shooting of messengers who bring bad news.

When applied in error this bias can lead to the conjuring up of the truly bizarre from the ordinary and everyday. Paul Barber in a recent study of vampire mythology gives many detailed examples of this (5). It would seem that myths such as the vampire myth arose around episodes of plagues. The death of one individual followed by the deaths of others commonly has led to the suspicion that the first death was only apparent. That the undead has returned to claim victims. Exhumation often appears to confirm this, as the initial stages of decomposition of a corpse often make it look more unnaturally alive than it was at the point of death. Thereafter all happenings in a vampire infested community will be grist to the mill.

Something very similar happens in the mental illnesses, especially schizophrenia. All too often in these conditions the appearances of the exhumed corpse are consistent with the bizarre hypothesis of the affected individual. An additional point worth making here is that seeing vampires as a myth is not the achievement of heroic or super-rational individuals. It is rather a cultural achievement. In chapter 7, it will be argued that a similar cultural effort will be required to lay to rest finally the ghost of mental illness.

DYNAMICS of DEPRESSION, MANIA and SCHIZOPHRENIA (6,7,8,9)

Take now a person who wakes one morning with slightly blurred eyesight. They are likely to be alarmed initially. Calming down, they may get up and see if things clear up when they get dressed. They may inspect their eyes. They will probably review possible causes of the problem. Any pills they are on? Did they drink too much last night? Have they a fever? A headache? Has this ever happened before? If so how long did it take to clear up then? Do they know anyone else who has had something similar? Didn't Daphne's multiple sclerosis start this way or Bob's brain tumour? Depending on answers to such questions and whether or not the condition shows signs of clearing up, they may decide to visit their G.P.

Imagine now if s/he says they can find nothing wrong. This may or may not be reassuring depending on whether the patient is convinced their eyesight is blurred or not and how concerned they are about it. Sooner or later if it remains blurred, our subject is likely to revisit their G.P. and if nothing else is suggested will raise the possibility of referral to an ophthalmic department. Suppose at the clinic they are investigated with a number of very large, expensive looking and obviously sophisticated machines and given an appointment for a few days later. Suppose on return they are informed that the good news is that there is nothing wrong.... A lot depends from here on our subject's presence of mind and the sensitivity of the clinician.

Our subject may be convinced that their eyesight is still blurred and that something is wrong. S/he may conclude that the doctors also know what is wrong but are trying to spare him/her the difficult news. Another possibility is that s/he may come to doubt their own belief that their eyesight is not what it was. This is particularly likely to be the case if the degree of impairment is relatively minor and can on occasion be ignored. On the other hand, even a minor degree of abnormality may come to be almost blindness depending on how much the subject becomes preoccupied with it. A further option that might be raised by the clinician, or may have already occurred to the patient, is that seeing as there is nothing wrong with the eyes, is there any other strain in the patient's life? Something going wrong at work? With your spouse? Trouble with the children? Would you care to see a psychiatrist? What will the psychiatrist do about it? Well s/he will start by confronting our subject with the evidence that nothing is obviously wrong. A thorough physical examination proves this conclusively....

Now suppose that after much time, expense and psychiatric treatment, aimed at working out why you mistakenly think you have a physical problem, it turned out that there had been something physically wrong all along. That there had been a misprint on some test printout. Or that the disorder in question lay outside the experience of the doctors consulted. Such an impugning of sanity, such a creation of mental problems, could today form the basis of a successful lawsuit - except in the case of the affective disorders and schizophrenia, where interactions with the patient routinely proceed as though the physical disorder was imaginary. The spotlight is thrown back on the complaining person, as thorough physical examinations prove that there is nothing wrong. The fact that physical treatments work is convenient but ignored. Physical complaints such as loss of energy, poor sleep, aches and pains are usually explained away as "somatisation", a supposedly unfortunate recourse of the psychologically unsophisticated who cannot handle their emotions.

An awareness of this encompassing framework is necessary to appeciate how the dynamics of the clinical situation evolve - as opposed to the supposed dynamics of the illness.

Depression

It is known that almost all depressed subjects are aware of multiple physical changes. Among these are increased frequency of aches and pains, pins and needles or other strange sensations throughout their body, gastric discomfort, dry mouth, skin and hair. In addition, they have disturbances of their appetite and sleep as well as a general flu-like malaise including loss of energy and interest. These, we argued in the last chapter, could as well be of physical as of "psychological" origin.

If the depressed subject is convinced that they must have a physical illness and they persuade their G.P.s that this is the case, then if the condition does not clear up with some tonic or iron or simply in the few weeks that may elapse between consultations, it is quite possible that they will end up being investigated for every possible physical illness known to modern medicine. They will have had multiple blood tests and X-rays, various different procedures and interviews by several different doctors by the time they come to a psychiatrist - if they ever come. During this time they may steadily lose weight - as depression causes anorexia. They may become privately convinced that they have a carcinoma and that everyone is conspiring to keep silent about it. (Given our typical handling of carcinoma cases, they have some grounds for their suspicions).

If not cancer, they may feel they have some other physical illness that can cause chronic physical debility without dramatic outer stigmata. Syphilis has been a favourite hidden fear. Aids may replace it. Myalgic encephalomyelitis (ME) is currently the most popular refuge of patients who rightly refuse to give up the idea of a physical basis to their condition. In between visits to the hospital, patients will typically read any material they find that seems any way pertinent to their case, whether gathered on purpose or just happened upon by accident.

As sure as not something will come to hand about carcinoma or syphilis that bears out their inner fears. Syphilis, if passed onto children can cause deformity of the teeth; "I always wondered why Anna's teeth were so poor". Occult carcinomas can be very difficult to detect and weight loss for no obvious reason may be the best indicator of their presence; "why can't my doctor see this?" As well as accidents hinting at possible diagnoses the vagueness of the clinical picture can feed into deep seated personal fears. Thus loss of libido may play into a long standing worry about homosexual or lesbian tendencies. Or impairments of concentration and memory may re-awaken fears of dementia kindled initially by having a relative who demented.

All psychiatrists have had the experience of being confronted with such cases. They are common ways for a depression to present. There would appear to be three possible responses. One is the possibility, that follows if one sees depression as a physical illness, of confirming the presence of a physical illness for the patient. This idea will be developed later when it will also be suggested that this is most likely to persuade the patient that they are understood. A second is to respond to the patient in terms that acknowledge that they have an illness that is not really real but is real for them. This is currently the commonest psychiatric response (10). The third possibility is to take a patient's often wild personal diagnoses as good evidence of some mental problem. But as regards the irrationality, or dynamics of what is happening, the patients in these cases are simply applying normal rationality to an abnormal experience. Our diagnosis of irrationality on their part stems from a failure to recognise the abnormal experience.

Given a state of affairs that must be explained for the sake of their sanity, they have simply set about trying to find answers in the same way as we all set about trying to find answers to

countless similar problems. They rely on experts but when experts fail, or fail to convince, they look elsewhere. They draw possible hypotheses from anecdotes exchanged with friends, horror stories heard on television or radio or read in newspapers by chance or gathered deliberately. The example of someone who suspects that there is something embarrassing wrong with them can make very good situation comedy. But the relevant point is that we all, in laughing, recognise how easy it is to twist everything to support quite implausible hypotheses. How easy it was for Othello to bring destruction upon himself.

The medical profession labels these behaviours as neurotic. But even without the help of the medical profession who are especially skilled at generating neuroses where none existed before, depression is an illness liable to lead to subjects diagnosing themselves as mentally unbalanced. This is because the core experience appears to be of a mild flu-like or jet lagged type of state, lacking clearcut physical stigmata. So lacking in clearcut stigmata that many subjects - and most therapists - miss the physical illness completely. Especially as the subtle disturbance affects one of our blind spots - our brain.

Even if at first convinced that there was something physically wrong with them, in the absence of supporting evidence many subjects will come round to blaming themselves. This after all is a diagnosis that accounts for a good deal of the data. People who mope around the place and complain all the time without having anything much wrong with them are useless, worthless people (representativeness bias). That is what I am doing therefore I must be useless and worthless. In such instances the immediate evidence, even though it be only of several weeks, will take precedence over the evidence of a lifetime (availability bias).

Seeing oneself as useless and worthless is in turn demoralising. Blaming oneself rather than one's brain inevitably leads to hopelessness and guilt. Therefore, on top of an initial flu-like lack of energy, slowing of mental functions and feeling "not right", judgements that this has all stemmed from the kind of person one is will lead to a secondary demoralisation, negative thoughts and general misery. Indeed, these latter features are quite likely to dominate the clinical picture. For example, being demoralised by seeing oneself as worthless is quite likely to lead to a much more dramatic loss of energy than the initial loss caused by the underlying depression. This latter loss of energy is not caused but happens for the very good reason that having energy seems to be pointless.

In general, illness behaviours are likely to amplify the original disturbance. The extreme instance of this in depression is suicide. Brain dysfunction as such cannot lead to suicide. But coming to the conclusion that one is a worthless wretch can - whether or not one is depressed.

If religiously inclined, it is common to find subjects wondering whether the Lord isn't punishing them for some past transgression, whether it be an affair, an abortion, a minor transgression of the law or otherwise. Such a person may become quite convinced that the evidence points to just such a conclusion. They may be well able to quote scriptural references or other indicators to the validity of their belief, while at the same time, not have any major crime in their past that would warrant the degree of sorrow and distress they feel. In such cases what appears to happen is that a subject trawls through their past life for evidence that would be consistent with their hypothesis. Naturally they find it as all us have at least some minor transgressions or occasions of shame in our past. Alternatively, demoralisation may be interpreted as abandonment or spiritual desolation leading to states of mental agony, dark nights of the soul.

If one's own disposition is not the problem, there is always the dispositions of others. If it is not something you have done wrong, could it be something they have done wrong or something they

are doing to you? Could they be conspiring to harm you? Does everyone know what is happening except you? Such thoughts go through the mind of some depressed people at least episodically. They may issue in ideas, such as the reason for one performing poorly or being off colour is because drugs are being put in one's food or that someone hates you and is trying to harm you.

One other disposition in particular bears scrutiny: that of one's partner. Rather than blame oneself, an alternative is to blame one's marriage or current relationship. After all books, dramas and innumerable psychology tracts testify to the fact that relationships are more often than not stultifying. What is this inability to articulate what is wrong other than a failure to be honest about the current state of the relationship? Such suspicions may be fueled if one partner becomes impatient with a state of affairs, where the other is unable to keep up their end of things, despite having nothing obviously wrong with them. These mutual suspicions may fuel an escalating process of recriminations, rising strain and hatred.

Rather than reverse this cycle the attentions of others, even of therapists, may aggravate it. By the time the depressed subject comes to a psychiatric clinic, it may seem obvious to whoever they attend that the relationship is the source of the troubles. Not unnaturally, the partner who is well may refuse to have anything to do with any therapy that implies they are equally (if not entirely) to blame for what is happening. A refusal that confirms the therapist in their hunch and happily absolves them from any failure to right the problem.

Mania

All of the above points made regarding depression are even more likely to apply in the case of mania. Unlike depression, manic illness gives an increase in physical energy and drive. This causes problems on two fronts. One stems from the bias that we normally expect illnesses to cause loss of function and are quite unaccustomed to the idea of them causing excesses of function (11). Another arises from the fact that like depression the basic disturbance in mania is subtle rather than gross (chapter 6). The kind of increased energy, we all occasionally experience during a morning that follows after staying up all night. Or that sometimes can occur after jet travel.

Given, therefore that someone with mania is even less likely than a depressed subject to make the correct situational attribution regarding their illness, how are they likely to account for increased vitality? Almost the only attribution open to them is in terms of personal qualities. Again as in depression the evidence of a lifetime is liable to be ignored in favour of the facts of several weeks of optimal or super-optimal functioning. The conclusion to be drawn from such functioning will be that the subject is a marvellous person. Seeing oneself as marvellous will in turn generate more energy. And as further projects are conceived and are relatively successfully executed, the evidence that one is marvellous grows. A variant on this belief in one's personal qualities is to believe that one has been chosen for some purpose whether religious or social. The investment of energy into a particular cause is more than likely to yield initial results thereby further fueling enthusiasm and the feeling one has indeed found one's vocation.

Such beliefs are likely to lead to a joie de vivre, which will amplify the original increase in energy. A joie de vivre that one has good <u>reason</u> for as life is not as much hard work as it had been before and living has a purpose. It is not caused or forced emotion. In support of this interpretation of the origins of manic elation is the fact that joie de vivre or elation is not a constant feature of mania (and is not found at all in many manic subjects) whereas overactivity is. In many cases the subject is overactive but irritable and restless rather than elated - something that arguably should not happen if elation was something that stemmed directly from a fevered brain.

Failure to recognise the abnormal experience of an involuntary increase in energy at the heart of mania is not confined to the affected subject. It characteristically also leads to observers labelling the behaviour of a manic patient as disinhibited, grandiose or unrealistic. But in such cases the observers are typically making the same attributional error as the patient and attributing to dispositions what should be interpreted in situational terms. And just as repentant sinners have always been more socially acceptable than prophets, manic subjects are likely to attract a diagnosis of irrationality whereas a comparable mental set in depression does not as readily do so. An accusation of irrationality or insanity would only feed into the current running through the mind of a depressed subject. But those who are elated have usually never felt more rational in their entire lives.

Accordingly a collision course is set up which frequently ends in the most distressing scenes in psychiatric practice. All too often the outcome is one where subjects are dragged out of their houses to waiting ambulances, protesting their innocence as they go. They leave behind them examining psychiatrists who are all too aware that they were less than convincing in their attempts to persuade the patient, that they were irrational and accordingly should accept admission voluntarily.

Schizophrenia

In the case of mania and depression, there are subtle disturbances of basal energy levels that can be plausibly explained in terms of an enhancement or fall off in personal functioning. This is not the case for schizophrenia, where the experience of the subject is at times unusual to the extent of objects changing size or luminance in front of one's very eyes. There are also feelings of loss of control of thinking and feeling and a sense of not properly inhabiting one's own body. No simple interpretation in terms of moral value or personal functioning will account for all of this.

Accordingly, if the affected subject is normally rational, as the experience involved is often one in which the world seems decidedly abnormal, they are likely to focus on the possibility of malevolent environmental influences. If any ideas of this nature slip out, subjects are liable to be told that the world hasn't changed; that its as normal as ever. But what is normal? The so-called normal world has always been a dark and dangerous place as various cultural, mythic and folklore materials illustrate. Could it be that these are truer than once thought? Alternatively, genes really are being engineered, viruses are being created in laboratories, minds are being shaped and controlled by the media, poisons are being put in the drinking water and international conspiracies do take place. This way craziness lies.

In all these cases the supposed malevolent environmental influences are liable to be personalised - fundamental attributional error. They are also liable to be coloured by current social concerns - availability bias. Thus individuals from Western cultures are likely to be worried about manufactured germs and lasers, whereas individuals from less technologically developed societies have until recently focussed instead on witchdoctors or voodoo type explanations. Representativeness bias will lead to the subject becoming "mad" as once diagnosed as mad, the weight of cultural expectations for madmen will bear down on them and affect their behaviour accordingly. As the hallmark of the mad has traditionally been the possession of delusional beliefs, the issue of delusions will be of particular relevance to schizophrenia.

DELUSIONS

The main themes and ambiguities of this and previous chapters converge on the question of delusions. Traditionally, they have been the hallmark of insanity, the prototypical clinical feature of the psychoses. In line with the earliest ambiguous meanings of that term, delusions were seen as affections of the soul or psyche rather than of the brain. However, as we noted in chapter 2, the

psychoses are now seen as brain illnesses rather than disturbances of the soul. As delusions are the characteristic feature of a psychosis, does this mean that they result directly from brain malfunctioning? On this hinges the whole issue of the nature of mental illnesses and the appropriate way to treat sufferers from these disorders. If delusions either reflect a profound defect of judgement or stem uncontrollably from brain disturbances, then notions of psychiatric patients being empirical investigators of their own condition would be seriously compromised.

For the depth psychologies, delusions were extreme instances of a neurosis. A complete rather than partial break with reality. The best known medical psychopathologists before Jaspers, so hostile to analysis on other fronts, in essence agreed on this point. Kraepelin classified delusions among the psychological elements of the clinical picture. In addition, he saw paranoia, a disorder that consists solely of delusions without any other clinical features, as being a functional psychosis but not as being an illness, as it lacked obvious features of cerebral dysfunction. Paranoia for Kraepelin was something that stemmed from instabilities in the personality of the affected subject. Bleuler saw the delusions of schizophrenia as a psychological overlay to the underlying illness. On some occasions he seems to have seen them as extreme reactions to an underlying abnormality on others as psychological complexes let slip out by an abnormally functioning brain. In neither case were they the direct result of abnormal functioning. Even Schneider saw the majority of delusions as part of the psychological superstructure of schizophrenia, rather than something that stemmed from cerebral dysfunction.

Today, in contrast, delusions are typically seen as stemming from abnormal brain function. As being almost as organic as loss of power or increased reflexes. Few psychiatrists would ever stop to consider handling delusions psychologically. The principal factor cited in support of such attitudes is the common response of delusions to neuroleptic medication. But before neuroleptics were introduced into psychiatric treatment, Jaspers had argued for delusions being disorders of form rather than of content.

The issue of whether delusions involve a disorder of content or of form brings us to the heart of darkness in psychopathology. At the start of chapter 4, it was noted that strange behaviour may reflect a disorder of content or a disorder of form. Thus the sudden jerking upwards of an arm may represent an act with a meaningful content - anger - or it may be a meaningless tic, as can occur with some brain illnesses. But what exactly is the meaning of the term a disorder of psychiatric form? If the reader has difficulty getting this straight in their mind, then do not despair because this is as it should be. The term is used as the symbol $\underline{X}$ is used in algebraic equations. X is the unknown. What will have a concrete specification once the equation has been worked out. It will never be used again once we know that $x = ab^2$ or whatever. The options for X if delusions are disorders of form rather than of content are that X = a neuropsychological disturbance or X = something else. If delusions are disorders of content, then X = a form of illness behaviour/neurosis or X = some form of inauthenticity.

Jaspers and Delusions

Jaspers defined delusions as intensely held beliefs, usually of eccentric quality, not open to rational testing. This is now the commonly cited definition given in psychiatric textbooks. But there are serious problems with it that Jaspers recognised but that many since appear not to. He conceded that normal people make errors, that logical argument does not necessarily persuade them of their errors and that the incorrigibility of delusional beliefs cannot be shown to differ from the incorrigibility of true insights. Given therefore that Jaspers definition could apply to many of the cherished beliefs that each of us hold, he was left with the problem of trying to indicate where delusional beliefs differed from other beliefs. What made them the disorders of form rather than content that he held them to be?

One line of thinking he took was that a necessary prior requirement of delusions was a supposed fundamental alteration in the personality of the subject. An alteration, he held, that resisted interpretation. It was this resistance to interpretation that made delusions a disorder of form rather than of content. In addition to this vague criterion, he introduced a criterion of departure from the legitimate pool of cultural beliefs to distinguish delusional from other strongly held beliefs. That is strongly held beliefs not open to rational testing are only delusions if no one else holds them. Similarly strange beliefs, if held by a number of people, are just bizarre and eccentric beliefs and not evidence of mental illness. This proviso is necessary or else beliefs such as a belief in apartheid or beliefs that are politically deviant could be taken as evidence of mental illness.

Since its formulation Jaspers' definition has been unsatisfactory. This or variants of it have given grounds to many to criticise psychiatric practice in terms of thought police and thought control. Such criticisms follow as the criteria that demarcate delusional from other beliefs are so imprecise that views, which differ substantially from the therapist's or views held by people the therapist does not like or feel sympathy for, are open to being labelled delusional. If all that were involved here was simply labelling some patients neurotic, there would be little problem but as diagnosing the presence of delusions brands the patient as psychotic and is liable to lead to loss of civil liberties, the issue is more serious. Especially as there is no effective appeal procedure against the diagnosis.

Unlike Jaspers, Schneider clearly stated that most delusions were essentially secondary psychological reactions to underlying abnormalities. However he held that some delusions were primary phenomena. That they arose in a non-understandable manner and thus were disorders of form. This distinction between primary and secondary delusions has come under attack, even by some of his colleagues. Matussek has argued that some of the experiences in schizophrenia are so unusual that they cannot easily be expressed other than as delusions. For example, if someone feels controlled by a television newscaster, they are almost certain to express this as a belief that they are being controlled. It would be very difficult to achieve the position of being able to say "it feels like I am being controlled but I know I am not". It should be noted, however, that except for primary delusions Schneider saw his first rank symptoms of schizophrenia, such as claims that there are alien thoughts or feelings in one's head, as unusal experiences rather than as delusions.

The modern argument in favour of delusions being disorders of form (organic in origin) is based on their response to neuroleptic medication. Several days or weeks on haloperidol or chlorpromazine in many cases leads to subjects appearing to lose the delusional beliefs that led to their admission to hospital. However, far from proving the point, the response of delusions to neuroleptics can equally be taken to indicate the opposite. The target symptoms of neuroleptics are tension and agitation (chap 6). They reduce tension and agitation in subjects who are not deluded as well as in **subjects** who are. When given to healthy volunteers, they produce a "who cares" feeling, a feeling of indifference. Therefore, they could be expected to make delusional beliefs less likely, if agitated states of mind rather than agitated brain states are the seedbeds of delusional ideas.

It would be possible to sustain the notion that neuroleptics cure delusions by a direct action on some organic substrate if they had no behavioural effects on volunteers. But as they do have clear effects, this position becomes difficult to maintain. Also awkward is the fact that states dominated by delusions without acute agitation, such as paranoia, show little or no response to neuroleptics. Another problem is the fact that many chronic psychiatric patients remain permanently deluded despite large amounts of neuroleptic medication. However, while these

drugs may not reverse their delusions and are accordingly later reduced in amount, they can still be used effectively to curb agitation when such patients become agitated.

Depressive, Manic and Schizophrenic Delusions

If delusions are disorders of form, that is as devoid of true content as a tic or an automatism, we should expect them to cut across the comprehensibility of the clinical presentation. If disorders of content, they should show a line of development from the underlying illness.

In the case of depression the delusions found are generally continuous with the illness behaviours characteristic of this disorder. For example, we have noted that possible hypotheses regarding the origin of the abnormal experience that is depression include ideas of physical illness. Very often a subject goes on to believe they have cancer or syphilis. One of the features of these beliefs is that it may be extraordinarily difficult to persuade the subject that they are incorrect. It is not uncommon to be faced with a celibate aged patient who claims to have venereal disease. They will commonly be almost impervious to argument or even to demonstration by blood test.

The other delusions found in depression are equally consistent with the nature of the underlying experience. For instance, there are nihilistic delusions which consist of beliefs that one is already dead or already damned. Or delusions of guilt that something one has done in the past, usually quite minor compared to the degree of distress now being experienced, is responsible for the present state of affairs. An alternative delusion of guilt may be the belief that one is responsible for everything that has gone wrong for one's family, friends or even everything going wrong worldwide. In extreme cases, some people go on to believe themselves to be leprous or pariahs, who should be shunned by others for fear of contaminating them. Paranoid delusions that others are persecuting you or plotting against you or that one's spouse is being unfaithful to you are also found.

As can be seen from the depressive delusions, these are more or less logically derivable from the underlying experience of the subject shaped perhaps by the other circumstances of their lives. In contrast to depressive delusions, manic subjects get delusions of grandeur or of supernatural assistance. Or they may see clearly what the problems of the world are, whether they be conspiracies or otherwise, and what needs to be done to solve them. Alternatively, they may be quite paranoid and believe that they are being persecuted. This latter set of delusions is not inconsistent with an underlying mania. It appears that mania is best characterised as a state of overactivity or increased energy rather than one of euphoria. In many cases this increase in energy is somewhat uncomfortable. Much as the surge in energy after a sleepless night or in some cases of jet lag may be uncomfortable. Accordingly, it is not surprising that some subjects' interpretation of what is happening to them will lead to a restless irritability rather than to elation. And it is from irritability that delusions of persecution seem to come.

The case of schizophrenia is somewhat more complex in that many people see the experiences that are central to the first rank symptoms as being delusions. As noted above this is understandable as experiences such as feeling controlled by the environment or not feeling at home in one's own body will almost inevitably be expressed in terms of odd beliefs. Particularly when these experiences become personalised in accordance with the fundamental attributional error. Such delusions however will typically be highly continuous with the underlying experiences.

However, such experiences can also be expected to shatter many basic assumptions about the world. One of the more remarkable things about sufferers from schizophrenia is that so many appear able to rebuild a relatively normal world after such bizarre experiences. A minority do not. They remain deluded indefinitely.

In these cases the delusions take on a life of their own, after the initial provoking experiences have subsided. In due course they will become embroidered and embellished and continuity with the original core disturbance may be lost. Some subjects will have a single set of delusions - such as tracing all their problems to the anarchists or the South African police. These beliefs will typically be dramatically elaborated. Others will have multiple tenuously related or unrelated delusions, many of which will be quite fantastic - such as beliefs that there are little green Martians wandering around, hopping in and out of peoples' bodies and generally interfering with the workings of things.

A number of things have to be borne in mind when considering the issue of chronic delusions. As we have mentioned the stereotype of the madman is he who is deluded. By virtue of this the capacity to be normally strange or eccentric will be taken away from those who have been labelled psychotic. Any utterance out of the ordinary on their part is likely to lead to others wondering whether they are becoming ill again or else lead to their conversation being increasingly dismissed as inconsequential. Similarly subjects who feel themselves decompensating and who seek professional assistance will know that the easiest way to obtain this is to appear as deluded. This is particularly the case for longstay inpatients, who almost of necessity must remain deluded in order to stay in hospital. It is not uncommon for such patients to be "deluded" only when being interviewed by members of staff.

In general, therefore, the delusions found in depression, mania and schizophrenia are consistent with the core disturbances found in each of these disorders and can be seen as exaggerated illness behaviour. So much is this the case that given the delusions a subject has without any of the other clinical features, a psychiatrist will typically be able to make a diagnosis. In chronic cases, the delusions can also be seen as examples of illness behaviours, even though in these cases the core disturbance has typically cleared up. In both acute and chronic states, the elaboration of delusional beliefs seems influenced by the heuristic biases outlined earlier. This should not be the case if delusions sprang directly from a cerebral malfunction.

Delusions: Psychotic or Neurotic?

Arguing that delusions are an exaggerated form of illness behaviour implies that they are essentially psychological reactions. That they stem from fevered psyches rather than from fevered brains or fevered minds. Does this not make them neurotic features of the clinical picture rather than the quintessential features of a psychosis? Arguably it does.

That such beliefs are extreme is unquestionable. But what is commonly neglected in such situations is that depressed, manic or schizophrenic subjects have a real fall off in their level of performance that must be explained. The seeming lack of evidence for these extreme beliefs can be taken as supporting an origin in either a fevered psyche or a fevered brain. This claim follows from recent experimental results in dynamic psychology which suggest that some of the most vehemently held beliefs of normal people get erected on the flimsiest of evidence and can be strengthened rather than abolished by disconfirmation (2).

The reader doesn't need to read the latest psychology journals to appreciate what is involved. An analogy with gamblers will suffice. The gambler who has money on the table, must come up with a strategy for winning. It appears to be a classic feature of human behaviour that in such situations we develop hunches often based on minimal evidence. Repeated disconfirmation may not lead us to revise our opinion. However, subjects who behave quite "insanely" at the roulette table, are usually indistinguishable from the rest of us once they leave it. The apparent clearing

up of delusions with physical treatments can on this basis be seen as an instance of removing the roulette table rather than a treatment which profoundly alters the capacity to be rational.

Furthermore, far from being alien to the reader some flicker of the thoughts and feelings outlined above for depression, mania and schizophrenia have probably occurred at least briefly to all of us. Usually, we lack the necessary stimulus or reason to consider them more seriously. Any hypothesis, no matter how implausible will be entertained by all of us on occasion. Implausible hypotheses get rejected as implausible not because of their inherent irrationality but when the situation begins to follow past experience and we get an inkling of what is wrong and the likely outcome of events. Failing this we would be foolish to reject any hypothesis. In particular, one cannot take it for granted that the world is not dangerous or other people not likely to harm you. Everyday experience confirms the naivety of such assumptions. The experiences of schizophrenia, depression or mania, I am arguing, provide the stimulus to take more seriously possibilities that otherwise would be entertained and discarded.

Despite the example of gamblers and the melting away of apparently unshakeable delusions, once the underlying disorders clear up, delusions are not yet seen as particularly dramatic forms of illness behaviours. The temptation for therapists, whether of psychodynamic or biological orientation to declare these beliefs as completely irrational and evidence of a break of contact with reality seems irresistible. The patient may also be aware that what they are claiming is eccentric and they may only disclose these hidden fears after a certain amount of trust has built up. They too are quite likely to take their beliefs as evidence of insanity as they often realise the unlikelihood of the thought content but do not recognise its source.

Given the usual definition of a delusion, it may come as some surprise to the reader, that psychiatrists talk about partial delusions. Partial delusions are irrational beliefs that do not have the full measure of conviction found in delusions. As such, given the usual definitions of the word delusions, these partial delusions are impossible entities. How can one have an entity that is both irrational and fixed and yet not fixed. Such states, however, are no problem to the analysis of irrationality proposed here. Indeed they are required by it. It is quite consistent with this analysis that many subjects attempting to explain an abnormal experience and bringing to the attempt all the illogicality of normal thinking should end up with conclusions that even they find hard to accept. Accordingly, some strange ideas of what is happening are likely to be offered to the questioner, with the qualifying words "you'll probably think this is crazy but.." In the end, however, the necessity to have some explanation that fits a good deal of the facts is likely to push many subjects, dubious of the odd conclusions they have come to into acceptance of such conclusions.

It may also come as a surprise to learn that clinically it may be impossible to distinguish between a delusion and a phobia (12). Take the case of a person admitted because they have a complaint about their bowels and wonder if they have a cancer. Repeated negative tests may not set their mind at rest. Have they a delusion or are they cancer-phobic? Similarly, many individuals who present with stories of being persecuted can be readily seen as having a persecution phobia but they are likely to be diagnosed as being deluded.

Arguably Jaspers' ambiguous definition was forced on him by a failure to appreciate the <u>inevitable</u> occurence of normal irrationality in situations of uncertainty. The discovery of systematic biases in normal rationality make it even less likely that differences from group norms indicate radical personality alterations. No defects of judgement or impairment of the ability to use logic have ever been demonstrated in schizophrenia. Even in subjects who are floridly deluded. Arguably therefore, the fact that the rest of us do not hold the odd beliefs of a schizophrenic can only be explained in terms of the latter beliefs arising as a result of the biases of normal rationality

operating on abnormal experiences. These experiences effectively put the affected subject in a culture of one. Given a similar experience would the rest of us not come to similar conclusions? The answer it would seem from experimental studies is yes (1). If so, there need be nothing intrinsically insane or irrational about a deluded person. Nothing more irrational than some communities coming to believe in vampires for instance.

The alternative to delusions being a form of illness behaviour is that they are neuropsychological disturbances or something else. Can they be neuropsychological disturbances? Stimulating the brain by means of electrodes may produce images, affects, memories etc. but it does not produce false beliefs. The fact that I think that there is an international conspiracy to keep quiet about pollutants in the atmosphere, which happen to be causing me ill-health, is a belief. This belief may stem from a vague feeling I have of being physically unwell. But it is neither itself an abnormal experience or potentially a description of an experience that cannot be expressed in other than delusional terms such as the even more bizarre statements that alien forces are controlling my will and thoughts may be.

Similarly organic brain disorders may produce isolated perceptual disturbances or memory difficulties but they do not produce delusions in the absence of anything else. Neuropsycholgists may be called in to investigate perceptual problems or memory difficulties, in order to determine the area of the brain that is malfunctioning but they are not called in to deluded subjects, as delusions have never been localised in the way that perception and memory have been. Organic disorders may produce odd beliefs such as simultagnosia that are impervious to reason but these do not have the quality of delusional beliefs. In addition, they can be clearly shown to be linked to perceptual problems in a way that delusions can not.

If it is conceded that delusions are not neuropsychological disturbances but it is nevertheless still maintained that they are disorders of psychiatric form rather than of content, then disorders of psychiatric form cannot be reduced to a set of neuropsychological disturbances. This, it can be suggested was roughly Jaspers' position. A position that straddled the ambiguities we have outlined. He argued that what made delusions disorder of form was an accompanying change in the personality of the deluded subject. Brain disorders may change personalities. But in general it is in the direction of coarsening or disinhibiting them and flattening intellectual range. These features are not typical of deluded subjects.

This issue is important as if disorders of psychiatric form can be something that is neither a neuropsychological disturbance or an instance of illness behaviour, it would become impossible to pinpoint just what a psychiatric illness is.

Sensitive Psychoses

The idea that delusions might be neurotic features of a psychosis is one that is resisted strongly in medical circles. In this regard the fate of the paranoid psychoses is instructive. The term paranoid psychosis is applied to up to one third of the psychoses that present clinically. It is used when the clinical presentation is dominated by delusions and betrays no other clinical features that would indicate whether the illness in question is an affective disorder or schizophrenia. Therefore judgement is suspended until the course of the illness becomes clearer. If it clears up most clinicians will say what has been involved is an atypical affective disorder. If it becomes chronic it will be termed schizophrenia, even though there may never be any first rank symptoms or visible disturbances of thought or affect.

While a good number of these cases almost certainly are affective disorders or schizophrenia, there is an alternative. This alternative has been championed by many investigators at different

times under various names - psychogenic psychosis, reactive psychosis, hysterical psychosis, psychoses in a sensitive personality. These terms have slightly different references but common to all of them is the notion that a psychological shock presented to a vulnerable personality may unhinge them.

For example, a 62-year-old lady came into hospital for an operation on a suspected tumour. She had been an upright hard- working lady all her life from a close and respectable middle- class family. She was widowed 5 years previously and now lived with a sister. She had three children with whom she got on very well. The day after her operation she became very distressed, began talking about being unclean and wishing she were dead. Her agitation grew uncontrollably over the following days. She refused to see her family. Close questioning indicated that she really did believe herself to be unclean and was convinced she was going to be in hell soon. There were no signs to indicate an affective or schizophrenic disorder at the initial interview or at any point during the following weeks before her condition resolved.

Further questioning, however, revealed a hitherto hidden secret. Forty years earlier she lost her first husband during the war. Two years later an airforce base was located near to where she was living. Many of the women in the area became friendly with the pilots on the base. She went out with several and finally slept once with one. From this encounter she contracted syphilis. When it became clear what she had she was mortified. She had it treated not just once but three times, even though the symptoms had cleared up after the first course of treatment. She told no-one of this. Not the man she married after the war. Not her sisters. Not her children. She always dreaded however that somehow the secret would get out. Possibly by admission to hospital and revelation through screening tests on her blood. Several days of treatment with neuroleptics and telling her children about the hidden side of their mother, however, cleared up her agitation and delusions and she finally left hospital a happy woman.

Far from this state being an insanity, it in many ways seems to have been very neurotic. This and many other paranoid psychoses can typically be interpreted sensibly. If it is conceded that this lady's condition was neurotic (an illness behaviour) it follows that delusional overlays to affective or schizophrenic disorders could equally be neurotic elements of these latter psychoses. In these cases the underlying cerebral dysfunction experienced by the subject could be seen as the stress that precipitates the neurosis. In support of this position is the general clincial recognition that depression commonly precipitates a neurosis of some sort, whether phobic, obsessional or hysterical or a generalised anxiety disorder.

The neurosis that gets precipitated depends very much on the premorbid personality of the subject. Indeed illnesses may reveal a good deal of the structure of person's personality. However, personality is not something that medical psychopathology has convincingly come to grips with. This is much more the domain of the depth psychopathologies. But arguably even more the domain of novelists and dramatists. Arthur Miller's recent autobiography Timebends contains a particularly rich collection of personality types (13). What becomes clear from his account is how many people there are who derail. Whose personalities become progressively defined by certain attitudes or values. Who lose the capacity to tolerate ambiguity. It is as though experiences dissolve in personalities. The addition of the wrong experiences or too much of one kind of experience can cause the lot to crystallise out.

Such is paranoia. A state where gradually some dissatisfaction slowly consumes the personality of the subject. Such as the shape of a nose, a hairline, an unjust outcome of a court-case or job interview, a mother's resentment at losing a son to some young girl or an awareness that it is luck rather than lack of ability that has led to one's mediocre life in contrast to the success thrust upon

some of one's contemporaries. These are the stuff that many delusions are made of and that Timebends suggests lie just beneath the surface of many lives. In contrast to the abruptly precipitated sensitive psychoses, paranoia takes over an individual insidiously. This often means that their madness may never come to public notice. But like the psychoses of abrupt onset, the roots of this disorder appear to lie deep in the personality affected rather than in any malfunction of their brain.

Suspended Revolutions

Why should the idea of a neurotic delusional state be so unpopular? One reason that can be offered is that if it ever were accepted the terms delusion, psychosis and illness would have to be redefined and would part company. Maintaining the link between delusions and psychosis would mean that the link between brain illness and psychosis would be stretched. This was Kraepelin's position. He was happy to have non-illness psychoses. Maintaining the link between psychosis and brain illness means that delusional states that are not clearly linked to an illness, should cause a problem - as they do. As should the idea of a psychosis without delusions. A further almost inevitable development is that delusions, as the hallmarks of brain illnesses, should also be thought to stem from organic disorder.

This confusion has been a legacy of the Jasperian revolution. An understandable one. Often the neuropsychological disturbances at the core of the affective disorders or schizophrenia are so subtle that they cannot easily be detected. Particularly when clinicians are biased against taking the verbal reports of their patients as evidence. In this situation the only "objective" clinical signs are the illness behaviours that cluster around the underlying disturbance. In the case of the milder illness behaviours, such as the demoralisation that goes with depression, it may be very difficult to distinguish these from the range of normal miseries, neuroses or eccentricities. But in the case of delusions, we reach a level of behaviour which is unusual without there being some underlying precipitant.

The difficulty with delusions lies in uncoupling typical association from invariable association. As delusions are typically associated with psychoses and as they have been the defining feature of psychoses from the very start, uncoupling these two terms is not going to be an easy task. It may not even be possible. As noted in chapter 2, the deliberations of American psychiatry, encoded in DSM 111, now define a psychosis solely by the presence of delusions or hallucinations. No mention of neuropsychological disturbances is made at all where the psychoses are concerned.

HALLUCINATIONS

Along with delusions, hallucinations are one of the hallmarks of insanity. What exactly are they? Typically, the definition offered is attributed to Esquirol from 1838. He is quoted as saying that hallucinations are sense perception in the absence of a sensory stimulus. This is then taken to imply that the brain rather than the psyche must be functioning abnormally, when subjects hallucinate. However, this version commonly leaves out an important part of the definition given by Esquirol, which in full states that hallucinations are a <u>conviction</u> that sense perception is taking place, despite the absence of a sensory stimulus. If the emphasis is placed on the conviction involved, hallucinations would seem to have more the character of a delusion than anything else. They might therefore occur in subjects with normally functioning brains.

Focussing on the issue of perception, also suggests that hallucinations do not require abnormal brain functioning for their manifestation. As noted in chapter 1, a lot of perception takes place in the absence of a sensory stimulus. Take dreams for example. The dreaming subject is not sensing but they are perceiving. Perceptions are constructions of the psyche put on sensory data to make sense of them. Perception results in images. The capacity to form images is not limited to

the processing of sensory inputs. We all can imagine objects that could never exist or events that could never happen. Furthermore, these images have a life of their own. They can be stored as memories and can reappear in dreams. The distinction between imagination and hallucination essentially depends on the attitude of the subject in according reality to the percepts or not. That is if the subject insists that visions seen in waking dreams are real, they are hallucinating. More commonly we recognise the unreality and label what is happening as daydreams, fantasising or overactive imaginations.

It may be argued that imagination operates to yield images inside our heads, while hallucinations refer to perceptions in external space. Surely this is a significant difference? In this regard, we may note that all perception is a gamble. Everyone will be familiar with pictures formed of dots where the full object is not seen but we fill in the appropriate blank spaces regardless of the absence of a sensory input. This is done on the basis of past experience. We make a guess about what it is that is lying in our field of vision. We may actually see it, even if it is not all there. The completion of several more lines or dots may force us to revise our perception. In such situations the constructive components of perceptions can be clearly seen. These constructions are determined by past experience, current expectations and the wishes of the subject. Thus on a crowded street or across a crowded room one may think one sees the face of a new love, until closer scrutiny disappoints. However, for a brief moment the face was seen. Depending on the intensity of current feeling the face may be seen or the voice heard everywhere.

All this means is that you are not in a calm enough frame of mind to make sensible perceptual bets. Similarly after a bereavement, it is relatively common and accounted normal for a bereaved individual to hear or see on occasion a dead spouse or child for some time after their death. Such insanity, however, should not be seen as a fever of the brain but rather as a fever of the psyche; as neurotic rather than organic.

"Or art thou but
A dagger of the mind, a false creation
Proceeding from the heat-oppressed brain?
I see thee yet, in form as palpable
As this which now I draw" - Macbeth

One strong indication that hallucinations result from fevers of the psyche rather than of the brain is that the perceptions involved are not just any perceptions as one might expect from abnormal brain function. Rather they are very specific perceptions, commonly in line with the expectations of the subject. Thus a depressed subject will hear a voice abusing them, telling them they are worthless or damned or urging them to kill themselves. The depressed person has a good reason to be hearing such voices. Seeing their hallucinations as caused, that is as stemming from abnormal brain functioning, makes less sense. Similarly, the hallucinations of mania and schizophrenia also reflect the concerns of affected subjects. In schizophrenia voices discuss the subject in the third person, as though s/he were an object to be manipulated.

In contrast, organic brain disturbances - the fevers of the brain, such as epilepsy, tumours, or drug or alcohol withdrawal usually give rise to contentless or arbitrary perceptual phenomena, such as noises or flashes of light or colour rather than voices or visions. In some cases, when the subject becomes delirious their visions become more formed. But in these cases unlike depressive or schizophrenic hallucinations, the visions typically change with great rapidity, merge into one another and while shaped by the personality of the subject do not in the same way reflect current concerns. Furthermore in cases of delirium, judgement is affected in that the subject is typically out of touch by virtue of being literally feverish. When formed organic hallucinations occur without

a fever, the attitude of the subject is usually different to that of subjects with affective and schizophrenic hallucinations, in that they typically are aware of the unreality of their visions.

All of these differences give quite a different phenomenological feel to the visions and the voices of the organic psychoses compared to the functional psychoses. So much so that a separate word, hallucinosis, was coined in the last century to distinguish them from the hallucinations of the affective disorders and schizophrenia. (Hallucinations can also occur in the organic psychoses as these also are brain illnesses which are a stress for the affected subject that may lead to bad perceptual bets). The difference between hallucinations and hallucinosis supports Jaspers separation of the functional psychoses from the organic psychoses on the basis that the latter showed the hallmarks of crude organic destruction, whereas the former appeared to involve a distraction of the mind.

A further pointer to the psychological nature of depressive or schizophrenic hallucinations comes from the experiences of some normal people. It seems that some of us (10%) every so often have strikingly vivid visions on waking from sleep or on falling asleep. These are called hypnogogic hallucinations (14). The point that these hallucinations illustrate is that it is possible to have hallucinations, when one's brain is functioning normally. Indeed to have detailed and complex hallucinations probably requires one's brain to be functioning normally.

The issue of hallucinations, however, hinges critically on the question of the reality of internal imagery. It is all very well to misinterpret something that is out there anyway. But hearing voices where there are no sounds that could remotely serve as the set of dots that a fevered mind can project an image into is something else. Until recently it was not scientifically respectable to take seriously the idea of internal tape-recorders or video-screens. Given this and in the absence of external stimuli that could be misconstrued, a recourse to cerebral malfunctioning was inevitable. But a number of recent studies, that only make sense if internal representations actually exist, shed light on what goes on when we hallucinate.

It has now been shown that subjects hearing voices typically sub-vocalise. By means of microphones attached to their neck, it has been shown that such subjects are actually themselves quietly speaking the voices they claim to be hearing. When told of this they deny totally that this is what they are doing. This denial if correct points to the possibility of a hysterical origin to hallucinations. That is, the subject is dissociated from his or her own psychological processes. They do not recognise their own imaginations or vocalisations.

Far from being mysterious or irrational such states can be induced under hypnosis (15). Induction by hypnosis suggests that a pre-requisite of complex hallucinations is an altered psychological state rather than an altered brain state. Hypnosis does not cause the brain to malfunction. It avails of psychological possibilities that are normally latent. Sub-vocalisation is what one might expect if a subject was actively participating in a conversation or train of thought within their own head. We all do it in daydreams. It is not what one would expect if voices were being forced on one by cerebral malfunctioning. Much the same thing can be shown to happen when subjects are asked to imagine scenes and actions. As they scan the imaginary happenings their eyes can be shown to move as though the activity were happening in external space (16).

DYNAMIC PSYCHOPATHOLOGY

We have argued that in both the affective disorders and schizophrenia disorders of neuropsychological functioning bring to consciousness experiences that normally operate without the need for conscious awareness. In such cases it is unconscious performances that are

brought to awareness rather than unconscious motives, reasons or psychological complexes. Becoming aware of these unconscious elements is not an advance in self-knowledge but rather its significance is more in the area of becoming aware of a knock beneath the bonnet of one's car.

Something is happening which shouldn't be. These experiences are hard to ignore yet difficult to articulate as they properly lack content. They persist in awareness as the usual means of removing things from awareness - thinking about them and dealing with them - will not work. Simply trying to attend will not reverse the attentional disturbances of schizophrenia. The exercise of will-power will not keep a depressed subject asleep. Indeed thinking about things that cannot be solved by thinking about them, invariably makes them worse.

But as things are not right the inevitable response of all of us will be to ask what has gone wrong and why. The answers we come up with will inevitably be shaped by the biases of normal rationality found in all of us when we are called to make judgements under uncertainty. The answers arrived at and the behaviours consequent on these answers, even when apparently delusional, would appear to be classifiable as a subset of illness behaviours.

As was noted, in the case of clearcut disturbances, such as severe chest pain or broken legs, there is only scope for a limited range of rational hypotheses or responses. But where the disturbance of functioning is less specific, hypotheses about what is happening may be much more varied. The neuropsychological disturbances of the affective disorders and schizophrenia might be expected to maximally generate such behaviours, as they almost completely lack physical stigmata. They can be expected therefore to function as the psychopathological equivalent of black holes. Sucking in all the surrounding material that comes to hand. Often not directly observable themselves and only detectable by the disturbance that surrounds them.

While surrounding disturbances may indicate the presence of an underlying discontinuity, they will only do so if one suspects what might lie behind the noise. Even then, the surrounding noise may so blurr any signal from the epicentre, that a diagnosis and prognosis may not be possible. Pushed into an eccentric orbit by the gravitational tug of neuropsychological disturbances, illness behaviours may amplify the underlying signal or distort it or even obliterate it. Eccentric orbits may also persist long after the original interference is removed.

The idea that most psychotic behaviour is neurotic has been resisted in psychiatric practice. Almost certainly as a reaction against the often exaggerated claims of the depth psychologies. An insistence on the essential uninterpretability of a psychosis, that stems from its being an illness, has helped medical psychopathology successfully defend the illness status of these disorders. But ironically, over-zealously applied this stance in practice has denied to the affective disorders and schizophrenia one of the hallmarks of other illnesses - a set of illness behaviours.

As a consequence schizophrenia in particular has become a caricature of a medical illness. All the behaviour of the schizophrenic subject is put down to their brain not working right and none to the interplay between personality and illness that occurs in any other clinical condition. Far from being enlightened, telling a subject that what is happening them is solely the effects of a brain illness is all to likely to also remove hope from the affected individual, as it immediately conveys the idea that there is little they can do to help themselves. This hopelessness is often compounded by confusion, when biologically oriented therapists then go on to dismiss as neurotic complaints, such as persistent lack of motivation, clumsiness or the constant presence of anxiety, which are probably often milder versions of first rank experiences. When faced with these

symptoms, they are likely to suggest that the illness is now quiescent and that the patient needs to get on about the job of living again as best they can.

Incorporating the notion of an illness behaviour overlay would be significant for psychopathology on three points. The first is a symbolic one. The results from studies on the formation of beliefs and the assessment of evidence, on which this concept rests, are formalisable in mathematical terms. The terms involved are probability estimates. As they stem from a recording of outcomes on tasks that can be administered to a large number of subjects, such that other things can be kept equal, they can potentially lead to universal generalisations. The nomothetic character of these findings undermines Jaspers' distinctions between the explanations of the natural sciences and the understanding of the human sciences. Based on these findings the interpretation of what is happening in states of clinical distress can have recourse to concepts as well grounded in probability estimates as those of any natural science. Indeed its concepts most resemble those of quantum mechanics.

The second point is that these experimental concepts are radically unlike the key Freudian concepts of Id, Ego, Superego, libido and Oedipus complex. They do however bear a family resemblance to concepts of defence mechanisms viz. projection, displacement, denial. Their difference from these latter concepts is more one of implication than of the kind of concept involved. The defence mechanisms imply something in the past of some of us that we need to defend against. Heuristic biases imply that we all have uncertain futures that we handle in predictable ways.

At present experimental correlations provisionally support explanatory constructs such as availability, representative and anchoring biases as well as a fundamental attributional error. These are a current best approximation to explaining why subjects faced with predictive decisions behave the way they do. Therefore they might be expected to shed light on clinical presentations, which typically involve subjects facing uncertainty. In the case of these biases their robustness can be determined by determining their frequency across a variety of behavioural situations. Accordingly these concepts are provisional and open to revision or abandonment according to the future course of experimental investigation in a way that Ids and libidos are not. Therefore, in cases of dispute, an appeal can be made to experimental data and its method of collection rather than to the authority of a master or to the logic of a deduction from first principles.

The third point is that that these biases belong to what is properly called dynamic psychology. Their application to psychopathology will properly result in a dynamic psychopathology. The thrust of this chapter is that if psychiatry seriously wishes to make medical illnesses of the affective disorders and schizophrenia, it will need to embrace the need for a dynamic psychopathology. It will also have to reconcile itself to the idea that the bulk of the "insanity" associated with these disorders will be best explained in dynamic terms. While the negativism and thought disorder of schizophrenia may be bizarre and beyond the compass of interpretation, there is little that is quite as obviously "mad" as full-blown hysterical states, as found for example in Lear or the Japanese overlord in Kurosawa's movie Ran (*). Similarly "mad" schizophrenic or depressed subjects would, on the present analysis, be schizophrenic or depressed and reacting hysterically to their situation. Hysteria, however, it should be remembered was the original point of entry for psychoanalysis in its attempt to make sense of the apparently senseless workings of the psyche.

A further important consequence of taking this step is that the affective disorders and schizophrenia should come to be seen as open to "psychotherapy". If the larger part of these disorders consists of understandable psychological reactions, then a rational management should be capable of significantly ameliorating these disorders - without the need to resort to drugs.

Whether cures are brought about will depend on the natural history of the disease rather than on any quality of the psychological management - a point argued further in chapter 6.

Another potential change in practice follows from the fact that the heuristic biases, in contrast to psychoanalytic concepts, far from being abstruse terms, only accessible to a psychiatric priesthood, would seem potentially accesible to all affected subjects. There would seem to be no necessary reason why patients cannot themselves work out why they end up in the states they do rather than having to wait for their therapists to interpret for them what has been happening.

Interestingly the picture of these illnesses that results from proposing that they consist of sets of illness behaviours predicated on an underlying neuropsychological disturbance coincides with the earliest medical intuitions that the functional psychoses might take their shape from an underlying disturbance but not be wholly determined by it (Chap 2).

*

"Diagnosing" Lear brings out many of the points made so far. Many would label such clinical presentations as hysterical psychoses. Others would argue that the term hysterical psychosis is a contradiction in terms; hysteria is a neurosis - no-one talks of phobic or obsessional psychoses. For some the use of psychosis in this context indicates severity - a more complete break with reality as evidenced by delusions. For others, the presence of delusions means that Lear could not be hysterical - although what state or illness he has is usually not specified in this case.