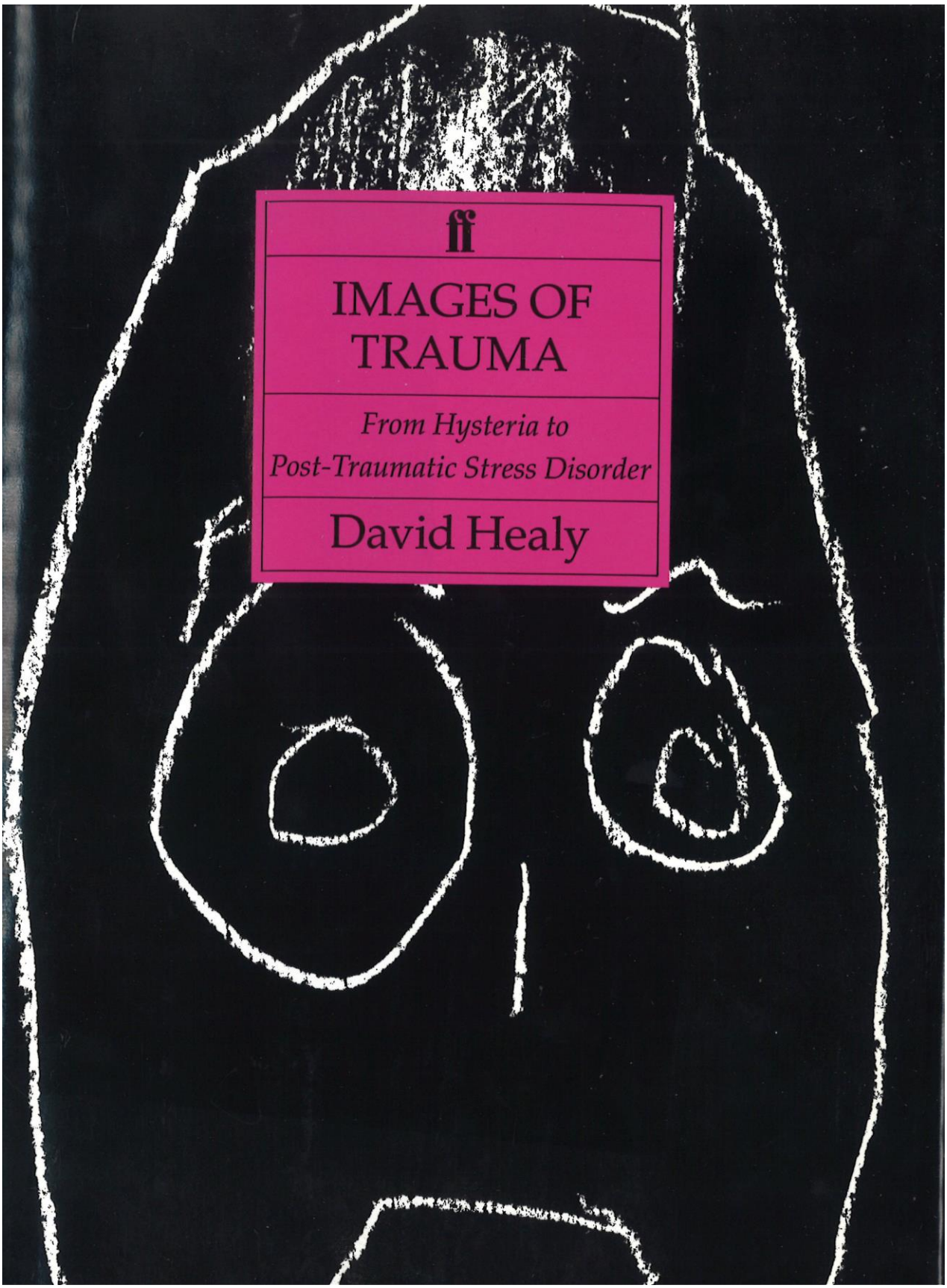

IMAGES OF TRAUMA

From Hysteria to Post-Traumatic Stress Disorder

David Healy

Images of Trauma
David Healy

Images of Trauma was published in 1993. A good time for a book on trauma. It was originally entitled Images of Uncertainty but the marketing department in Faber thought trauma would work better.

Shortly afterwards Faber got out of books of this kind to focus on their core market – poetry, plays and highbrow fiction. The marketing consultants must have gotten to them. One consequence was they never produced a paperback version of Images.

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In assembling the material, I was worried the message might deviate from the message in Shipwreck of the Singular. This is the book I have least confidence in. To my surprise, despite a 30 year gap there is a lot of consistency.

INTRODUCTION

Consider the following clinical cases. A nineteen-year-old girl is admitted to a psychiatric unit. She seems miserable and depressed. Sustained and vigorous treatment with ECT, a variety of antidepressants and combinations of antidepressants, as well as treatment with neuroleptics, do nothing to alleviate her condition. Finally, after a year of treatment, despite little change and repeated suicide attempts, she was discharged from hospital.

lt transpired that this girl had been multiply abused on two separate occasions in what appeared to have been organized abuse. At no point during her stay in hospital was she questioned about sexual abuse. These aspects of her care were first stumbled on many years later by friends watching her nightmare. Subsequently under hypnosis, she gradually pieced together a story of considerable trauma, for which she had been amnesic for ten years.

Since childhood Steven had suffered from nightmares and sleepwalking. This became a particular problem when, in 1935, he was hospitalized because of an infection. To prevent him from sleepwalking about the ward in the middle of the night his hands were bound behind his back. On one such occasion he awoke and, in a half-conscious state, found himself tied down. Although he could not untie his hands he was still able to evade his bodyguard and escape into the surrounding countryside. He returned a few hours later.

Some ten years later, Steven was again admitted tb a hospital - this time in an attempt to cure recurrent sleepwalking. One evening at about midnight the nurse saw him struggling violently on his bed, apparently having a nightmare. He was holding his hands behind his back and seemed to be trying to free them from some imaginary bond. After carrying on in this way for about an hour he crept out of bed still holding his hands behind his back and disappeared into the hospital grounds. He returned twenty minutes later, awake. As the nurse put him to bed she noted deep weals like rope marks on each arm, of which Steven, until then, seemed unaware. The next day the marks were still visible.

Steven's physician believed that the marks were stigmata caused by reliving the traumatic event of a decade earlier. To test this, he caused Steven to relive that experience under a hypnotic drug. While reliving the experience Steven writhed violently on the couch for about three- quarters of an hour. After a few minutes weals appeared on both fore- arms. Gradually these became deeply indented and finally blood appeared along their course. Next morning the marks were still clearly visible.

A sixty-year-old woman was admitted to hospital following the death of her husband. She had many signs of depression - poor sleep, loss of appetite, loss of interest. But she was unlike most depressed subjects in that she did not know where she was and seemed to forget shortly after being told. She seemed not to know that her husband had recently died, claiming that he was alive somewhere - probably away doing some important business. That he had left her did not appear to bother her.

When her children visited, she paid no heed to them. When she did engage others it was to tell them that the car park was sinking or that the main hospital building had burnt down or that the Red armies were coming.

A course of electroconvulsive therapy substantially improved her, but whenever she went out with her children for the weekend she came back worse. A meeting with the family indicated that, while they all appeared to love her, none was happy to have her come to live with them. Finally one of her children took her home for a month's trial period but brought her back after a week as her mother had begun to act bizarrely - wandering around claiming she had no head, and hiding in wardrobes. Back in hospital her bizarre behaviour failed to resolve, and further courses of electroconvulsive therapy (ECT), antidepressants and neuroleptics had no beneficial effects. Her general disorientation led to her being transferred to a ward for demented women. There she could often be found standing up against the wall in a crucifixion posture for hours. She sometimes claimed she was blind, and indeed when walking around she often bumped into things. But on such occasions her eyes, typically, were closed.

Despite all this, when taken out on ward outings to a nearby shopping centre, she, uniquely among the group, was apprehended for shoplifting. This and other incidents left ward staff certain that she was not demented, that she knew all that was going on around her. And on occasional days she could be perfectly lucid and engage in conversation entirely appropriately. She has now been in hospital for several years.

A young boy of eight 'goes off his feet' abruptly. Later that day he is seen by a psychiatrist because his GP thinks the condition is probably hysterical. In discussion with the psychiatrist, it turns out that the boy's father had promised to bring him to the cup final. He was not able to keep his promise, but the final was drawn and there had to be a replay. Again, the father promised to bring the son and again let him down. When faced with the prospect of telling his friends his legs gave way. He walked out of the psychiatric consultation.

In contrast Estelle, aged twelve, while wearing a new dress one day got into an argument with a friend which ended in her being pushed over backwards. She fell and soiled her dress in a most embarrassing way. She came home and tried to conceal the shame. The following day she began to lose the power of her legs. She remained paralysed until healed by hypnosis eight years later.
A fifty-five-year-old woman was in court to testify about a road accident. Having talked at great length when asked to she later interrupted further proceedings to let the court know about something she had just remembered. An irate magistrate ordered her to shut up. She did - for over a year. Why she later recovered was not very clear to subsequent therapists.

A man in his sixties due shortly to retire from a sales job loses his job because the business goes bankrupt. He has to sell his car. He could retire and supplement a rather meagre state pension with donations from his children. However, he has always worked and feels obliged to keep on doing so. He finds factory work nearby doing unskilled labouring in uncongenial surroundings. His family notice

that he begins to become withdrawn and unhappy. After two years it becomes too much for him and he quits. Thereafter he sits at home all day doing nothing. This provokes anger and concern at home. His general practitioner refers him to a psychiatrist who diagnoses depression and tries him on antidepressants, to no avail.

Shortly after this visit he begins to have difficulties walking. His gait becomes more and more peculiar, especially the left leg, which he drags after him while hopping forward on his right leg. His left arm sticks out at an odd angle. When asked what is wrong, he complains of a pain in his knees. He has several falls which lead to hospitalization for suspected minor strokes or epilepsy. But no abnormality is discovered. He is sent home unchanged. His voice then begins to fail, at first slowly, but the failure is progressive so that after a few months it has almost completely disappeared. He can still communicate by writing. When asked why no one has been able to find anything wrong with him he writes, because they have not looked hard enough. The man has by now been almost aphonic for over a year. No one knows how to help him. He seems condemned to remain at home in this odd state until he dies.

Finally, an attractive twenty-year-old girl is brought into hospital seriously depressed. She has stopped eating. She sleeps poorly, if at all. Her answers to all questions are that she has killed people, she is a murderer, and she will be executed. She always looks distracted, at times appears to be having visions and on occasion is seen to walk backwards. Neither antidepressants in large doses nor neuroleptics make any difference. ECT is considered, as she is seemingly delusionally depressed. However, the nursing staff feel there is something different about this lunacy and suggest diazepam instead. She responds rapidly to a moderate dose of this and is normal within a few days. Subsequent discussions reveal that the episode began following an argument with her family about whether she should be going ahead with a marriage scheduled for a few weeks later.

Many such patients can be found in the back wards of psychiatric hospitals where the staff will invariably feel that it should be possible to do something for them - that there is only a very small divide between a life inside the asylum and full and complete recovery. They represent some of the most difficult cases to be found in psychiatry. If asked to diagnose them, I would use the term hysteria. Many of my colleagues however would bridle at such a suggestion, claiming that there is no such thing. In part this is because the label hysteria gives no clear guidelines for specific treatment or indication about likely outcome. There is no consensus about how such states come about or how they should be treated. Whatever term is used to refer to them the individuals concerned appear now, and appeared to Freud and Breuer in 1895, to be suffering from a psychological problem. But what is a psychological problem? Why is there a dispute about what term to use for states such as these? Is the dispute at all responsible for our lack of progress as regards their therapy? These are the issues this book will deal with.

In 1980 the American Psychiatric Association (APA} created the category of post-traumatic stress disorder (PTSD). It also recognized for the first time that this or any 'psychological problem' could be precipitated entirely by external stress. The recognition of PTSD and a number of allied disorders has had legal and financial repercussions that were possibly not apparent when the change was first mooted.

Until 1980 what passed for the psyche was a curiously insubstantial thing. While artist may have believed in it, businessmen and lawyers ignored it. For the past hundred years one could seek legal redress or financial compensation for physical injuries resulting from negligence, but not for psychological suffering. All of this has changed since 1980. The potential consequences for the Life Sciences and for culture in general are immense. The impact on the practice of psychiatry, clinical psychology, psychiatric nursing and social work has been immense.

Since 1980 the face of mental health work has been changing rapidly as a host of neglected problems and their disturbing implications have surfaced. There are now serious questions being asked about

whether we have too quickly written off reports of childhood abuse, physical violence or mental torture in the histories of individuals diagnosed as having schizophrenia, often, it now appears, on no better grounds than that they have been seriously disturbed.
Why should all this seem so new and produce a sense almost of panic when Freud surely discovered nearly a hundred years ago that the neuroses could be precipitated by environmental events? The answer to this is complex. In 1895 Freud claimed that childhood sexual seduction led to hysteria - effectively that hysteria was what would now be called PTSD. In so doing he was one of the first, along with Pierre Janet, to claim that psychological problem could be precipitated by environmental stress. But more than this, he effectively discovered, along with Janet, the psyche and its disorders the psychoneuroses.

However along with the discovery of the psyche Freud became entangled in the hazards of psychodynamic interpretations; he became increasingly uncertain whether accounts of abuse in childhood could be believed. Within a year, he was to revise his view of the neuroses and claim that environmental factors played a minimal part in their precipitation. Unlike Janet he began to view the aspects of the psyche he had recently discovered as superficial and set about creating a new method of analysing the psyche that would avoid the hazards of interpretation that had misled him in 1895

This sea change had consequences. One has been a tendency on the part of both psychiatrists and psychologists to rule out of court the evidence from their patients' mouths. In great part this stems from Freud, whose post-1895 theory about why we behave the way we do had extensive recourse to the notions of repression and symbolic representation. ln postulating a repressive agency that keeps the most important things out of consciousness, and out of the social domain, and permits their expression only through the veil of symbols, he subverted our confidence in ourselves, producing a sense of helplessness in the face of psychological distress. Living with our fantasies and daydreams and experiencing the effects of anxiety does not, it would seem, give any of us much confidence about what to do for others who are disturbed by internal demons. In part, this must surely be because of Freud's legacy that there are depths to the psyche that the ordinary individual cannot plumb and that tinkering around on the surface is at best worthless and may even be dangerous. In contrast to Freud, I will argue that, in order to understand our psyche and its disturbances, we would do well to focus on the images in our mind's eye and to pay closer heed to the voices that ring in our inner ears or the thoughts that flit through our heads. These have in the past been dismissed as superficial. But far from worrying about any deeper meaning current work suggests that these images and events can profitably be taken at face value. What is required is often a good description of what really is in the mind’s eye rather than any interpretation of it.

Freud's change of opinion also affected cultural notions of psychological distress. In 1895 hysteria was the commone.st psychiatric disorder, yet now it is apparently extinct. Both psychiatrists and antipsychiatrists have joined forces in dismissing it as a mythical disorder. Social historians have used the example of hysteria as evidence in favour of the thesis that mental disorders are merely socially sanctioned avenues for the expression of distress. For example in Elaine Showalter's marvellous book, The Female Malady, the author describes in detail the constraints of the female role and indicates the pressure on women to become hysterical. But while describing the role from within, at no point does she describe the resulting disorder from within. A truly psychological account of hysteria does not exist.

I will further argue that hysteria can neither be reduced to nervous malfunctioning nor be understood simply in social terms. By a psychological account, I mean something close to what Freud was offering in 1895 - an account that focuses primarily on the internal images and dialogues of an affected individual, as opposed to an account of what may be happening to their neurotransmitters or of the social pressures that may shape their distress. My aim is to give an account of the imagery and emotions that seem to get out of control in neurotic disorders and of the psychodynamics that may govern entries and exits on this internal stage.

In linking particular psychological states with specific historical events involving sexual abuse, about which there must necessarily always be a certain amount of uncertainty, Freud almost fatally compromised the development of dynamic psychology. The same problems confront us today when we are faced with stories of satanic abuse of children. Can we ever be certain that we are not being deceived by accounts of past happenings that rest primarily on images and memories accessible to one individual only? The spectre of uncertainty thrown up by this problem has, more than any other, dogged psychology from its inception. It was in an effort to attain the supposed certainties of true science that Freud created psychoanalysis. In contrast behaviourists claimed that the demons within the cranial box are no more than insubstantial wraiths, that have no positive existence and hence are not amenable to scientific investigation. The appeal of this claim led to behaviourists supplanting psychoanalysts in the halls of scientific orthodoxy during the middle years of this century.

While Freud struggled with these issues Pierre Janet also linked hysteria to trauma. Janet's psychology was a psychology of consciousness, as opposed to the focus of psychoanalysis on a dynamic unconscious and that of behaviourists on the external appearances of behaviour only. However, from being the foremost investigator of the emerging science of dynamic psychology during the 1890s Janet was eclipsed by Freud, and his psychology of consciousness withered on the vine. The 1980s, strangely have seen both the rediscovery of Janet and the notion of a psychology of consciousness as well as the apparent comprehensive demise of both psychoanalysis and behaviourism as intellectual forces in psychology. Between 1890 and 1980 lies a story that concerns the nature of science.

The first six chapters of this book consider the question raised by Freud and Janet as to whether hysteria is precipitated by environmental events. They come down in favour of the argument that, broadly speaking, hysteria is precipitated by trauma, but that trying to interpret what has actually happened may be hazardous and trying to intervene to put things right far from easy. But if this were all that was involved the significance of the creation of PTSD would be minimal. Hysteria today is after all but one of many neuroses that are recognized, and an uncommonly diagnosed one. Does the recognition of PTSD have implications for the other neuroses or for the larger notion of mental illness?

To tackle these questions the scope of the book needs to be broadened. In Chapter 7 recent developments in neurobiology and in the computer modelling of the psyche are outlined, focusing in particular on current research on the nature of internal imagery, the emotions and consciousness and on the question of what distinctions can be drawn between conscious and unconscious psychological processes and how disturbances of these processes may contribute to psychological disorders. Chapter 8 takes these issues further and considers what makes the unconscious dynamic and what dynamics govern entrances and exits on the conscious stage. These issues are taken up against the background question of whether depression is a post-traumatic neurosis. In answering this negatively, and going against the grain of common assumption, I hope to make clear just how hazardous it may be to make interpretations about any relationship between past trauma and present distress. This chapter will also indicate how the management of uncertainty is central to the operations of both consciousness and the unconscious, a theme that will resurface in Chapter 10.

Chapters 2-8 focus on the images and dialogues that form what we term the stream of consciousness. Attempting to interpret these makes psychotherapy a hazardous enterprise, but one whose hazards can potentially be managed scientifically. However, psychotherapy also attempts to do something altogether more mysterious: it attempts to discern the movements of the emotions. This has always been viewed at one and the same time as the greatest ability of the healer but also as a potentially subversive activity. Chapter 9 takes up this problem, charting the attempts of the psychotherapists from Mesmer through to Freud to deal with this issue and noting how such attempts have tended to derail into messianism and to meet with medical resistance.

Why this should be is taken up in Chapter 10. In essence the answer given is that the healer, as traditionally conceived, stands opposed to Descartes' vision of man as divided into a mechanical body

and a spiritual mind. This division was of central importance to the development of modern science, but it has made of modern science a mechanical enterprise. The existence of internal imagery and emotions and our increasing appreciation of the role of uncertainty in psychological functioning poses a gathering challenge to this mechanical approach.

It is against this background that the neuroses (psychological problems) are invested with significance. They straddle several divides - the brain-mind divide, the mechanical-holistic divide and the genetic-environmental divide. In so doing they reveal much of what it is to be human and point up a number of radical tensions in contemporary medicine. One such tension centres on the implication that individual psychological breakdowns are the fault, or fate, of those so afflicted, rather than a consequence of the social or political systems within which we live. Another lies in the implication that psychological disorder as an instance of mechanical breakdown is appropriately corrected by mechanical means - such as drug therapy. A welter of legal and financial interests hinges on these issues. Given the interests at stake it is not clear what the consequences of the creation of PTSD will be.

1 THE HISTORICAL ORIGINS of HYSTERIA

If a woman becomes suddenly voiceless you will find her legs cold, as well as her knees and hands. If you palpate her uterus, you will find it is not in its proper place. You will also find that her heart palpitates, that she gnashes her teeth, that there is copious sweat and all the other features characteristic of those who suffer from sacred disease (epilepsy). Such women may do all sorts of unheard-of things.

Hippocrates.

The matrix is an animal which longs to generate children. When it remains barren too long beyond puberty, it gets discontented and angry and it wanders about the whole body, closing the issues for air, obstructing respiration and putting the whole body into extreme danger, causing all variety of disease, until at length desire and love bringing a man and a woman together make a fruit and as it were plucking the fruit from the tree, sow in the womb, as in a field animals unseen by reason of their smallness and without form.

Plato.

Sigmund Freud first entered the scientific limelight with his Studies on Hysteria, co-authored with Josef Breuer in 1895. The central contention of this book, that hysteria was a disorder of reminiscences, a disorder predicated on traumatic memories, a psychological disorder, rather than a properly nervous disorder, would not appear in the least bit controversial now. However, nothing comparable to this had ever been claimed before Janet, in Paris, and Freud and Breuer, in Vienna, put forward these ideas in the last decade of the century. We are so accustomed now to considering this possibility in some form or other, that the momentous nature of the breakthrough can only be recaptured by attempting to reconstruct the pre-1890 orthodox point of view on the origins of hysteria. It is such a reconstruction that chapter 1, attempts.

However, as rest of this book will reveal, there is more than simply the historical reconstruction of a vanished world-view involved in this exercise. The forces that shaped pre-1890's orthodoxy did not simply dissipate with the first rays of the new psychodynamic dawn. Rather the influence of those forces, which had led before 1890 to a conception of hysteria as an endogenous disorder arising in a degenerate nervous system, have remained potent and perhaps even dominant in both psychology and medicine to this day.

Etymologically the term, hysteria, means a disorder stemming from the womb. The cardinal features of the disorder from antiquity included convulsions but also a feeling of suffocation, as though something was pushing into the chest from below. As these symptoms were much commoner in women than in men and as the idea that the uterus was immovably fixed in the pelvis did not become established until the 17th century, it is not totally surprising that many saw the illness as resulting from a migration of the uterus upwards. Migration upwards might be caused by deprivation of intercourse. This would lead to the uterus drying up, losing weight and hence rising. This view in turn, inevitably, meant that neither men nor children could be properly hysterical.

Not everyone accepted the migrating uterus view. As early as 200 AD Galen preferred the idea that hysteria was caused by the emanation of vapors from the womb. Because of Galen's

enormous influence, this was the dominant paradigm, until at least the end of the 17th century. The vapors, it was argued, arose from the retention of menstrual blood, or of female semen or as a result of the toxic effects of fluor albicans (thrush). In the case of the first two, marriage and pregnancy were the obvious long term solutions but tickling the cervix by midwives, to release the toxins, was an immediate hygienic manoeuvre that might also be undertaken.

Galen's theories of disease also implicated sexuality in the origins of hysteria in another way. This followed from his view that health involved a balance of humors in the body. This led to the common practice of bleeding of sick subjects in an attempt to restore a supposed balance. It also led to attempts to treat diseases by blistering - raising blisters so that noxious vapors could escape. The sexual faculties provided a regular source of imbalance - once a month in the case of menstrual discharges - and an irregular but frequent source of imbalance in the case of masturbation.

The first clear shift away from the uterus came in 1667, when Willis referred to hysteria as the "so-called uterine disease". He classified it instead as primarily a convulsive disease caused by an alteration of the nerves and brain. By means of the nervous system, he wrote, "are revealed the true and genuine reasons for very many actions and passions that take place in our body that would otherwise seem most difficult to explain: and from this fountain, no less than the hidden causes of diseases and symptoms, which are commonly ascribed to the incantations of witches, may be discovered".

In 1682, Sydenham commented that hysteria was the commonest chronic disease. It affected females (hysteria sensu strictu) and males (hypochondria). He argued that it was caused by some ataxia or faulty disposition of the animal spirits (nerves). But it took 100 years for the nervous origins of hysteria to become a clear possibility.

THE PASSIONS OF THE SOUL

The defectiveness of the sciences we inherit from the ancients is nowhere more apparent than in what they wrote about the Passions. This is a topic about which knowledge has always been vigorously sought and though it does not seem to be one of the most difficult – because, as everyone feels them in himself, one need not borrow any observation from elsewhere to discover their nature – nevertheless what the ancients taught about them is so little and for the most part so unbelievable, that I cannot hope to approach the truth unless I forsake the paths they followed.

Descartes, The Passions of the Soul: Article 1

As early as AD 200, while emphasizing the humors and the uterus, Galen had noted, at post-mortem, thin white "tubes" that ran from the spine and brain to the heart, lungs, and other organs and hypothesized that these carried the "sympathies", which were responsible for the intimate involvement of our bodies in emotional states - the excited flutter of the heart, the sinking of the gut or the terrified constriction of breathing. It, nevertheless, took until the end of the 17th century for any detailed work on the nervous system to be undertaken.

Neurosis

It took a further hundred years for this work to begin to influence thinking about behaviour. The notion of a neurosis crystallized between 1765 and 1785. The term was formally introduced by

William Cullen, although the idea that general lassitude or suboptimal behaviour of obscure origin could be put down to "nerves" had been put forward a few years earlier by Robert Whytt.

Cullen defined the neuroses as disorders that involved disturbances of nervous functioning, without any obvious lesion or inflammation being apparent at post-mortem. In much the same way the word nephrosis had been coined to categorize functional disorders of kidney in the absence of demonstrable abnormality or inflammation (as occurred in nephritis). For Cullen hysteria was one subdivision of the spasmodic neuroses - all or which involved abnormal movement of muscles or muscle fibres. This group also included tetanus, epilepsy, colic, diabetes, palpitations and whooping cough.

Given contemporary views of the nervous system, in which nerve cells had not been recognised and the idea the nerve fibres conducted impulses between cells was a long way distant, it is not clear what Cullen meant by the term, neurosis. He couldn't have actually meant faulty nerves. It seems more likely that he saw the neuroses as malfunctions of the system as a whole, with no one definite, localized disturbance. These generalized disturbances of function displayed themselves in the production of pain, increased or decreased sensitivity to internal or external stimuli, spasms and general disorders of muscular movement and in weakness.

The contemporary view was that the nervous system was of a piece, permeated in some unspecifiable way by an immaterial spirit. Therefore, this early notion of a neurosis, perhaps, should not now be taken to mean either a disorder of what we now understand as nerves or as an entirely physical disorder. Pinel, for example, saw the neuroses as being caused by the passions of the soul. The alternative explanation offered was that they resulted from the effects of sympathetic influences on the brain from malfunctioning of the stomach or organs of reproduction or other parts of the body.

With Cullen and Pinel, the notion of a neurosis became fashionable and there was a huge expansion in the number of diseases that were considered neurotic. However, shortly afterwards one of the so-called neuroses, apoplexy (stroke), was discovered to have a very real and demonstrable cause in loss of brain tissue. By 1840, it was clear that many of the disorders that Pinel and Cullen had described as neuroses had since been demonstrated to have either a localisable basis in nerve cell destruction or indeed to have nothing to do with nerves at all. For the remainder, who had "neurotic" behaviour in the absence of a localisable lesion, the notion of a reflex was to provide a possible basis for explanation.

Reflex

The machine of our body is composed in such a way that all the changes taking place in the motion of the spirits can make them open some of the brain's pores more than others... All the movements we make without our will contributing (as happens when we breathe, walk eat and in short do all the actions common to us an beasts) depend only on the arrangement of our members .. - in the same way in which a watch's movement is produced by sheer force of its spring and the shape of its wheels.

Descartes' The Passions of the Soul: Article 16 (17)

Rene Descartes, in the mid-17th century introduced the notion that men and animals might function in many respects like automata. This view required physical and mental operations to

take place by means of tugs and pulls using some equivalent of ropes and pulleys and springs, or else by a hydraulic process involving fluid and valves. The obvious candidates for such threads or pipes were the nerves.

Descartes suggested that on stimulation by pain, for example, delicate threads lying in the nerve bundles are moved, which open valves within the brain and release animal spirits, sensitive and irritable substances, which then led to muscular movement. However, Descartes did not mean that this should be an automatic and unconscious reaction, of the kind that we now mean when we use the term reflex.

Such an automatic and unconscious process might account for strictly vegetative functions but not for behaviour proper. For example, he meant that the physical sight of fire would be associated with a mental image of flames. Animal spirits in the brain on catching a glimpse of such an image would be reflected in fright toward the muscles disposing them for flight. Until about 1830, the primary meaning of the term reflex connoted some form of reflection in the sense of judgment. Although some actions may seemingly occur beneath the level of conscious awareness, as in mechanically removing one's foot from a flame that one is not looking at or in knee jerks, these Descartes argued did not happen without the reflection of the soul. Such acts were after all invariably wise.

Descartes and Robert Whytt after him argued that reflexes might be governed by some lower faculty of the soul. The case of anencephalic infants, who were nevertheless capable of movements, was a strong pointer toward the possibility of such unconscious knowledge - a troubling one for those who believed that such acts had to be governed by some wisdom of the soul. So also were experiments on removing the brains of animals, which did not necessarily lead to complete passivity of the animal. Such findings greatly troubled scientists and philosophers. The reason being that the nervous system was seen as a whole piece - not as a system composed of millions of individual cells organised in various hierarchies.

While Descartes was prepared, it seems, to envisage the nervous system as a machine with the soul localised to the pineal gland, for the most part the soul was thought to inhabit the nervous system as a whole, as there were no subdivisions to the system. The notion that the nervous system was organised in layers was only introduced by Gall in 1810. The potential autonomy of the different layers that this view pointed towards, caused a problem, in that it seemed to point to the possibility that things could happen outside the control of the soul.

Gall's work on the internal hierarchy of the nervous system fragmented the system. This made it less likely that there could be one overall disturbance of functioning and more likely that there could be localised pathologies within the system. This view was reinforced by the work of Magendie and Hall, who separately demonstrated that the spinal column was not just a system for carrying messages from the brain but one that contained systems that could operate independently of the brain.

This demonstration transformed the entire situation. It became possible to conceive of actions being reflex, in the sense of automatic and unconscious. When Hall introduced the term "reflex" for such automatic and unconscious acts, he stood the original notion upside down. This was one of the key acts of the emerging neuroscientific revolution of the nineteenth century.

The other major development, although one little remarked on, was the notion of the unconscious that was implied in this formulation. Whytt in a comprehensive review has shown that an idea of an unconscious has been around since the Greeks - Freud did not discover it. But essentially this earlier unconsciousness took the form of depths to the soul, some of which might be effectively impenetrable. The emerging idea of an unconscious, automatic reflex was radically different to this. This was not a localised piece of the soul. This was unconscious because it was simply a piece of machinery and one for whose operation there was no need to postulate the operations of either a soul or consciousness. As Laycock put it "researches of this kind whether instituted on the insane, the somnambulist, the dreamer or the delirious must be considered like researches on analytical chemistry". As the researches of Laycock, Carpenter and others began to postulate and discover reflexes at ever higher levels of the spinal cord, the view of man that was implied became one that was steadily beginning to look radically different to anything conceived by previous generations.

The notion of a reflex gave substance to the idea of the nervous system becoming disturbed in sympathy with disturbances in other organs such as the kidneys, teeth or uterus by a reflex mechanism operating outside consciousness. For example, inflamed kidneys might be expected to lead to spinal irritation and thereby reflexly disturb the function of other organs or lead to generalised nervous irritability. This was not just an armchair theory of the neuroses. It led to the removal of kidneys and teeth in patients, who far from having specific renal or dental problems, had presented with complaints of being generally unwell.

Where hysteria was concerned, the notion of a reflex overcame the implausibilities that resulted from an exclusive reliance on a uterine pathology. Rather than have the uterus migrate, it was now possible to have nervous impulses from the uterus diffuse upwards bringing abnormal sensations to other areas of the body. One obvious treatment for such a condition was hysterectomy - a treatment undertaken enthusiastically it would appear.

Associations

When introducing the idea of a mechanical and unconscious reflex, Hall had in mind something that played a part in the functioning of the spinal cord. He did not envisage its extension to the central nervous system. Progressively over the following 30 years, Griesenger, Laycock, Jackson and others extended the idea of the reflex up into the central nervous system to account for increasingly more complicated behaviours.

As reflexes happened automatically and unconsciously, their efforts raised for the first time the idea that consciousness might be an unimportant spectator of human activity rather than its guiding focus. This point of view was dramatically put forward by Thomas Huxley, who in defending Darwin, suggested that consciousness was no more important to human functioning that the whistle of a locomotive was to the running of a train or that conscious awareness was akin to the mist or steam that hovers over machines while they work.

However, there was another possibility. This lay in an associative model of the mind. This model argued that all there was to mental functioning was the associative bringing into consciousness of mental images. One image or thought would automatically lead to another. Association theories had begun with David Hume in 1750, who argued that we remember things because of associations between what is in our mind or what we see and what is then remembered. The theory was taken further by John Stuart Mill, who added the notion that we begin life with a tabula rasa, on which later impressions are inscribed. The associationist model

suggested that certain images or memories could lie dormant in the mind, if no associative connections were made between them and other ideas or feelings. They could be effectively subconscious.

Subsequently, Alexander Bain argued that a simple associative theory could not possibly explain the complexity of human functioning or the efficiency of learning. He argued that there must be some pleasure-pain mechanism involved. Thus associations would be built up in certain ways because of the pleasure that pattern offered. It was not just simply trial and error learning but trial and error stabilised by pleasure or pain. His best known example was drawn from the birth of lambs. After birth they thresh about, get up and stumble about. But once they find their mother's teat, their behaviour becomes goal directed very quickly.

It seemed plausible around 1850 that one central nerve cell might contain one association, image or thought. Associations might therefore operate reflexly. This marriage of associative theories of the mind to reflex models from physiology effectively led to the birth of scientific psychology. In 1855, Herman von Helmholtz demonstrated that impulses travelled along nerves at a specifiable speed of 40 metres/second. This opened the way for an experimental psychology that aimed at investigating associative reflexes, by computing reaction times - how long it takes for a word or an image to conjure up another. This was undertaken by Wundt, one of Helmholtz's research assistants, who from 1875 began the systematic investigation of mental life using the reaction time as his principal experimental probe. For this work Wundt is commonly cited as the first true psychologist - as opposed to physiologist or philosopher dabbling in psychology.

The marriage of associative theories and reflex models also led directly to Freud's early formulations and later to the key notions of behaviourism.

DEGENERATION

One of the most important consequences of Descartes' division of individuals into a mechanical body and non-mechanical mind was the effective elimination of the psyche. Before Descartes, it had been commonplace to view the soul, although indivisible, as having three divisions; the highest involving the rational faculty, the intermediate as involving memory, the emotions and consciousness and the lowest involving the passions and appetites. Faced with the problem of where the soul was located in the body, Descartes proposed that the animal faculties resided in an essentially mechanical brain and the higher faculties hovered therein, being located if anywhere in the pineal gland. In such a schema, there is no obvious place for any intermediate faculties of the soul, this led to most of these being assumed into the mind and to the disappearance of a distinctive psyche composed of memory, the emotions and consciousness.

Under Descartes' influence, it was not possible to have a psychological problem - there could only either be spiritual or mechanical problems. If a subject had breathing difficulties, convulsions, paralyses, hallucinations or any other manifestation of hysteria, these had to involve some physical pathology of the organ in question. This might be a minimal disorder not visible at post-mortem, which could lead to a sympathetic disturbance of the nervous system, which might in turn be aggravated by emotional state. But some physical disturbance had to be there. Dysfunction without a pathology could only point to a spiritual problem. As serious disorders of the spirit implied damnation, every effort was made to find a physical pathology.

As the notion of the reflex was extended to ever more complex behaviours and in particular when it linked up with the associationist model of the mind, there came a further development. The notion that the nervous system consisted of a hierarchy of reflexes opened up an irresistible possibility - that at some point in the chain of reflexes there was a fault leading to a degeneration from optimal functioning. Some of the reflexes might be degenerate.

The term degeneration was introduced by Morel in 1857. By 1860, it was well on its way to being the central tenet of psychological medicine. Degenerate reflexes, it was thought, were something that might be inherited. Indeed, the idea of hereditary degeneracy was almost inevitable as demonstrating an acquired degeneration of nervous functioning was effectively beyond the resources of the day. Time and again the authors of the period, from Briquet through to Freud, when discussing individual case histories note that their client came from degenerate or neuropathic stock. This it was assumed laid the basis for the abnormal nervous reflex that was hysteria. With the notion that a degenerate reflex might underlie their physical presentation, the neuroses became for the first time an unequivocally physical illness.

In the hands of concerned physicians, the use of the term degenerate did not have the implications that it might seem to have now. It implied a mechanical breakdown of function, which was some improvement on the belief that behavioural disorders were, in some way, a lingering manifestation of original sin. However, degeneracy quickly became a broad notion - just as neurosis had 80 years earlier. All sorts of imbecility, antisocial behaviour such as alcoholism, drug abuse and criminality, as well as the neuroses were put down to degeneracy.

In this manner, degeneracy became the first theory to attempt to account for social problems in terms of biological disorder. Allied to an associationist psychology, the notion of a degenerate reflex was invoked to explain perversity and disturbing behaviour of all sorts. This followed as the reflexes that would normally conjure up "normal/acceptable" associations and mental contents might be expected, if degenerate, to lead to abnormal associations, some of which would be perverse or antisocial. It was also conceded that such aberrant reflexes might have creative outcomes on some occasions - which led to a widespread association between being an artist and being degenerate.

Given the supposed heritability of degeneracy, and the generally higher birth rates among the lower social orders, there were serious concerns that civilisation would inevitably become extinct. The breeding of the perverse and neurotic rather than the brightest and the best would lead to an increasing enfeeblement of social life - signs of which every generation seems to see in those who come after them.

The notion of degeneracy, therefore, was never simply a biological or socially neutral one. This lengthy attempt to establish the historical pedigree of the concept of degeneracy has been undertaken for a purpose. Most theories of the neuroses, until recently, have been essentially variations on this early notion of degeneracy. The neurotic has been always thought to be in some way weak or flawed. For a brief period around 1895, Freud challenged this notion. But in developing psychoanalysis, I will argue, he moved back to one of the most radically degenerate theories of neurosis that there have been.

THE EXPLORATION of HYSTERICAL NEUROSIS

In 1859, Briquet published a treatise on hysteria which became the seminal study of the subject. To this day, Briquet's syndrome refers to a clinical picture, usually affecting women, of

having something physically wrong with oneself most of the time. It leads to repeated visits to family doctors. Once it has been "proven" that the particular presenting complaint does not indicate serious illness, another takes it place. In some severe cases, the syndrome is only diagnosed after successive unnecessary operations. In extreme cases, individuals end up with abdomens crisscrossed by surgical scars. Some recent estimates suggest that milder varieties of the syndrome may exist in up to 10% of the adult female population. Such cases would formerly have been diagnosed as hysteria but as there is a great reluctance to use this term today, Briquet's syndrome is used instead.

The significance of Briquet's work, in the 1860's, was that it helped to establish anaesthesia as one of the hallmarks of hysteria. Ninety-three of his collection of 400 cases of hysteria had a relatively pure hemi-anaesthesia (one half of their body was less sensitive to stimuli than the other) and many more had a variety of other anaesthesiae. Briquet and others proposed that this anaesthesia was linked by a reflex mechanism to ovarian morbidity on the same side as the anaesthesia.

Another syndrome, neurasthenia was first put forward in 1869 by George Miller Beard. This term literally means weakness of the nerves. It tended to be applied to a more middle class clientele, with hysteria being reserved for more demonstrative working-class behaviour. The typical neurasthenic felt weak and tired and lacking in will-power but rarely had convulsions, paralyses or crises. The cure was to travel, to take rests, to put on weight or some combination of all of these. It was supposed that the stress of fatigue or loss of weight uncovers a degenerate link in the nervous system. (The term neurasthenia has, like Briquet's syndrome, also come back into vogue today).

A further indication of how the neuroses, and hysteria in particular, were viewed at the time comes from the response to metallotherapy. This was stumbled on by Victor Burq around 1847, who found that copper appeared to reverse hypnosis. In so doing, it also seemingly dissolved hypnotic anaesthesia. Based on this, he argued, that anaesthesia must form the actual basis for hypnosis. As hysteria typically also involved anaesthesia, a formal link between hypnosis and hysteria was established. Burq claimed good results using metals to treat hysterics.

It took a number of applications to the Société de Biologie, in Paris, before Burq's request for independent assessment of his findings was finally noted. Finally in 1876, the Société's director, Claude Bernard, at the time perhaps France's most prestigious scientist, agreed to investigate. He appointed three of the best-known physicians of the day, Jean-Martin Charcot, Amedee Dumontpallier and Jules Bernard Luys to conduct the investigation. They came down in favour of the scientific importance of metallotherapy. Some indication as to why they did may be gleaned from an incident from one of Charcot's ward rounds. Apparently one day while talking about hysterical anaesthesia, in the presence of some visiting English physicians, Charcot pin-pricked the arm of one of his patients. He expected her to be anaesthetic but she reacted with pain. Irritated, he asked afterwards what had happened and was told that Burq had earlier in the day applied his metal plates to the patient.

The effect of metals on the anaesthesia found in hysteria was of immense significance for Charcot. Working from the Salpêtrière, in Paris, he was the foremost neurologist of the day. He had earlier risked clinical ostracism in arguing that hysteria involved real nervous disordering, with degenerate nervous reflexes as its basis.

For Charcot, the clinical stigmata of hysteria involved anaesthesiae, convulsions and paralyses. He argued that in its prototypical form, in individuals with grande hysterie, there were four distinguishable stages - epileptoid states, violent movement, hallucinations and finally a confusional state. Typically, the attack would start with the patient falling backwards, becoming rigid and adopting strange arched postures. So unnatural were these postures and so seemingly beyond the capability of normal people, they almost certainly constituted one good reason why most observers thought that there must be some organic disturbance involved.

Charcot became a principal proponent of the degeneracy theory of the neuroses. He collected medieval paintings and accounts of both states of possession and the trials of witches and took pains to illustrate how the unfortunate victims, who were often burnt at the stake, were hysterical (physically ill) rather than evil. He noted that one of the medieval tests to determine whether a subject was a witch or possessed was to search for an area of anaesthesia (the devil's claw) on the skin - by 1860 of course this seemed to be the cardinal clinical feature of hysteria.

In the case of hysteria, Charcot initially thought that the degenerate reflex could be mobilised by fixing the subject's eye. Intense concentration, it seemed, led into the hysterical state. However, this was a rather subjective and indefinable procedure. In contrast applying Burq's metals it seemed could disrupt the state. Further unusual things occurred. While the metals might restore sensibility in an affected area, Charcot noted that very often the opposite side of the body became anaesthetic. Not only that but after the metals were removed, the anaesthesia would oscillate back and forth from side to side of the body.

Subsequent clinical investigation added further details to the mystery. Another common hysterical symptom at the time was unilateral blindness. Sight it seemed could be restored in eyes that had been blind but the restoration often led to the opposite eye going blind. More uncommon was unilateral loss of colour vision. The application of the metals led to the restoration of colour vision. But interestingly the colours appeared in one eye and disappeared in the other in precisely the order that the latest physiological experiments on colour vision had suggested they should if the phenomenon was real.

Workers at the Salpêtrière set about explaining what was happening. They noted that electrical currents and magnets could produce similar effects. They inferred that the metals, coming in contact with moist skin, were setting up minute electrical currents but that this was enough to have large knock-on reflex effects within the system. The experimental work done was very sophisticated given the available laboratory resources. Electrical differences were found in the skin around the site of the metal and inverse differences were detected on the opposite side of the body. Similar changes can be shown today. Such findings were also demonstrated on healthy volunteers and in laboratory animals.

For Charcot and colleagues, the importance of these findings lay in their pointing to the nervous reality of hysteria. A variety of the most eminent scientists from around Europe came to see for themselves. Few demurred. Criticism tended to be from a distance and took the form of suggestions that all that was involved were effects produced by expectant attention. The Salpêtrière response to the criticism of expectant attention was - if so why do we find the same effects in animals?

Despite this support the Salpêtrière edifice began to topple during the 1880's, under challenge from Hippolyte Bernheim in Nancy. When he ensured that his subjects were unaware of the presence of the metal, Bernheim was unable to reproduce the Salpêtrière findings. Given some hint of what was expected of them, however, all the symptoms in the world could be produced. While putting the effects of metallotherapy down to suggestion, Bernheim did not however deny the existence of hysteria. It was, he said, an altered state often brought about by trauma. According to Bernheim it was not necessary for actual trauma to have occurred to a hysteric, merely to have conceived of some accident was enough. Such was their suggestibility, in the act of conceiving the accident was effectively realised. This was a groping toward a psychological conception of hysteria but it is not clear what mix of physical, spiritual or psychological factors Bernheim saw in hysteria.

Charcot had taken his stand on the fact that the disorder that was hysteria was a genuine one, that patients were not feigning their illness. At the time hysterics were often dismissed as liars. But if they were lying, Charcot argued, they did so reflexly rather than deliberately. The question of feigning was raised in a particularly acute form, when Bernheim argued that hysteria involved suggestion and not the induction of a nervous reflex as had been proposed by Charcot. This question was later to be the rock on which Freud's first attempt to formulate a dynamic psychology perished. It was also a burning issue in World Wars 1 & 2. It has become one again today with stories of ritual satanic abuse of children. In the confusion, individuals with hysteria have all too often been caught between being seen as either degenerate or malingering.

Traumatic Hysteria

There is one further important aspect of Charcot's work on hysteria - a demonstration of the possibility of a traumatic neurosis. The full significance of this will be developed in chapter 5. Using clinical cases Charcot illustrated that shocks - such as witnessing accidents or coming close to being involved in them - sometimes led to paralyses, to losses of voice or of vision or to amnesia. These states were all but indistinguishable from the paralyses, blindness or amnesias brought about by organic disease. Charcot, however, by restoring function under hypnosis and by reproducing similar conditions in hypnotic subjects, was able to show that they owed their origin to trauma, rather than to organic destruction.

However, even this did not lead him to a fully psychological or environmentally determined conception of the neuroses. He saw the traumatic neuroses as arising through the action of trauma on a weakened nervous system to produce the effects by reflex, rather than through the production of an altered psychological state. Similarly, Briquet and Bernheim also endorsed the notion that trauma might precipitate hysteria but again both saw the trauma as acting on either a weakened nervous system or on a feeble mind.

An association between hysteria and sexual trauma first began about this time. In 1857, Ambroise Tardieu published a medico- legal study of assaults on decency. He drew attention to the frequency of sexual assaults on children. Between 1858 and 1869 in France there were 9,125 persons accused of rape or attempted rape of children, especially of girls between the ages of 4 and 12. Tardieu was solely concerned however with the physical effects of such abuse. He did not consider that there might be specific psychological effects.

While Tardieu appears to have believed that these assaults took place, orthodox medical response tended to deny their reality. Fournier in 1880 and Brouardel in 1883 argued for "the simulation of sexual attacks on young children" and speculated on "the causes of error in expert opinions with respect to sexual assaults". "Hysteria plays a considerable role in the genesis of these false accusations, either because of genital hallucinations which stem from the great neurosis or because hysterics do not hesitate to invent mendacious stories with the sole purpose of attracting attention to themselves". In addition, it was held that for hysterics lying was often the result of a degenerate reflex rather than intentional act.

HYSTERIA 1890

What seems lacking in the notion of hysteria up to 1890 was any feel for or concern for the internal psychodynamics of patients who were being labelled hysterical. With the discovery of the traumatic neuroses, the scene was set for the discovery of the psychological aspects of the disorder and its potential precipitation by environmental factors.

However, a number of obstacles stood in the way of this discovery - or perhaps more precisely of its incorporation into the existing body of science. One was that the notion of a psychological disorder had yet to be discovered). Another was the need for a clear distinction between psyches and mind: a distinction that I would argue we still have not fully established. These conceptual issues would have inevitably taken a great deal of time to work through. The difficulties involved, however, have been compounded by the fact that these discoveries and their associated conceptual implications have taken place against a background of powerful vested interests. Interests that have, broadly speaking, been hostile to the idea of an environmentally determined psychological disorder.

2 THE EMERGENCE OF THE PSYCHE

The clear discovery of the idea of a psychological disorder, as well as the discoveries of the psychological nature of hysteria and the possible precipitation of psychological disorder by environmental events were interlinked events. This complex of ideas was simultaneously discovered by Pierre Janet in Paris and Breuer and Freud in Vienna. Exactly who made the most complete breakthrough is a matter of debate. All 3 got hold of the idea that neurotic patients had images in their minds' eyes and that the nature and origin of these images rather than any physical pathology or moral failings should be the focus of concern. I will begin with Janet, as strictly speaking his L'Automatisme Psychologique, published in 1889, was the first footprint in the sand.

JANET ON HYSTERIA

Working from the Salpêtrière in Paris, Janet began publishing on hysteria in 1887. From the start he characterised it as an illness of fixed ideas. In a foreshadowing of current community psychiatry arguments, he argued that Salpêtrière thinking on hysteria had been overinfluenced by the population of hysterics within its walls. As a hospital with a strong neurological tradition, it inevitably attracted subjects with convulsions, paralyses, anaesthesiae. Equally its doctors were predisposed to think in terms of nervous reflexes. These he argued were the accidents rather than the essentials of hysteria.

Writing in 1907, he listed the major symptoms of hysteria as somnambulism, fugues, multiple personalities, convulsions, paralyses, blindness and loss of speech as well as digestive and respiratory difficulties. While anaesthesia was a common accompaniment of any of these states, for Janet it was not invariably present as it had been for Charcot. In all these cases, he argued, there was a disturbance of consciousness rather than an abnormality of reflexes. However, while emphasising the psychological nature of hysteria, Janet appears to have believed that it most often occurred in neuropaths (individuals with some degeneracy of their nervous system). He also refers to it as a moral disorder on occasions. This oscillation between neuropathy and morality indicates that even in 1907 the notion of the psyche had not achieved an identity clearly distinguishable from both brain and mind.

The term somnambulism refers to a state of altered consciousness, in which a subject may think and act in a distracted or absent fashion. In its extreme form it amounted to sleep walking. But it was far commoner in forms where the subject was apparently wide awake but apparently not fully aware. Janet accounted for it in terms of subjects acting under the influence of an idea or an imagination. For example, one of his patient's had a beloved niece who threw herself out an upstairs window and was killed. Subsequently the lady would have turns in which she would seem to alter consciousness, begin to mutter about the niece and would start moving toward the nearest window, leaving her relatives and friends afraid that she would throw herself out.

Another patient who nursed her mother during a terminal illness, began, after her funeral, episodically to re-enact in detail the events surrounding her mother’s death. The somnambulism included hallucinating the presence of her mother and making ready for her own suicide by lying down on what appeared to be an imagined train line. After seeing the train come towards her, with horror on her face, she usually came to just after it should have run over her. She then resumed daily living as if nothing had happened. Typically, she and other subjects were amnesic afterwards for what happened them during the period of altered consciousness.

Nowhere was this amnesia better demonstrated than in fugue states. A fugue is an extended somnambulism, in which the subject may appear normally conscious to outside observers. Typically they wander away from their present circumstances and end up elsewhere having apparently no idea how they got there, or in some cases even who they are. This has led to a number of celebrated cases, such as that of the Rev Ansell Bourne, described by William James. He left home and lived elsewhere for several months before suddenly switching one day to being able to remember who he was but having no idea of how he had come to be where he was. Janet has left many descriptions of such fugue states. In general, they seem to happen in states of stress, especially mounting stress. They are not uncommon in students in the weeks before exams.

In such cases, Janet argued, subjects act under the influence of an idea that has become dominant, relegating other concerns, even details of personal identity, to the very margin of awareness. In the case of convulsions, there was invariably a trauma of some sort, remembering which threw the subject into a paroxysm. It would often only take some significant word to trigger off the paroxysm, without a memory of the trauma coming clearly to consciousness.

The same was true he argued for the paralyses, of which the case of Estelle in the preamble is a good instance. Often it appeared that the trauma need not actually have happened, in order to precipitate a paralysis. Thus, someone whose leg narrowly missed being run over by a train might be left with a paralysed leg afterwards. Giving way of both legs was particularly commonly noted. Janet pointed out that hysterical paralyses are usually far more complete than the corresponding organic paralyses. Where a stroke patient can usually move their affected limb to some degree, the hysterical patient is often totally incapable of movement.

While arguing that anaesthesia was not invariably present in hysteria, Janet found it in up to 66% of his cases. It also appeared to persist in milder forms in a number of cases after recovery. It had/has the unusual character of not conforming to the accepted distribution of nerves. Rather hysterical anaesthesia can be distinguished by its conforming to a lay-person's idea of what a nervous lesion should give. Thus the whole of a hand might be without sensibility, whereas actually only one half of the hand should be affected as different nerves supply each side. Furthermore, despite this loss of pain and other sensations, he noted that hysterical patients do not end up with severe burning of a limb because of accidental unnoticed contact with something hot - as happens to patients with an organic loss of pain sense.

Looking closely at the phenomenon, Janet came to conclusion that what was involved was a loss of memory for the paralysed or anaesthetised limb. He suggested that affected subjects were not able to imagine their paralysed hand being lifted up to touch their nose, for example. The representation of the limb did not appear to enter consciousness. Close observation of paralytics indicated that they could move their legs normally when they were lying down, bend them, twist them, sometimes even get up and hop awkwardly on them but the idea of walking seemed to be lost.

Janet also described a number of hysterical problems of vision - subjects who were blind in one eye or had restricted fields of vision or who had lost colour vision. The interesting thing about these difficulties was that it seemed the subjects must be perceiving normally in some sense. For example, in the case of blindness involving one field of vision only, it was possible

by using a system of mirrors to induce subjects into seeing what they otherwise seemingly couldn't. From such experiments, Janet concluded that hysterical subjects could sense normally but were unaware of their own perceptions. They seemed unable to attend to their own internal imagery.

In trying to put these findings together, Janet rejected Bernheim's idea that all that is involved in hysteria is suggestion. His conclusion was that the highest functions of the individual, their will, is suspended and that personal consciousness is contracted. In this state, things can happen and be processed by consciousness without entering personal consciousness, leaving an amnesia afterwards as a result. None of this, he argued, can be explained in terms of suggestion. The indifference and absent- mindedness of hysterics, he thought, were never suggested to them. Rather it is because subjects end up in a state in which they forget all else, that they are suggestible to a most extreme degree.

In line with the then dominant associative models of the mind, Janet suggested that in hysteria, owing to a paralysis of personal consciousness, suggested ideas are not inhibited by associations that would normally interfere with their full development. In the normal course of events, if the idea of doing something novel or outrageous comes to mind, we will pretty quickly run through the likely consequences in our mind's eye. Thus we imagine ourselves having a passionate affair only to have the reverie interrupted by images of our children wondering why we have left them. Without such inhibitory associations, we would be at the mercy of every passing fancy or suggestion - as he believed hysterics to be.

When normal subjects imagine a scene such as a dance, he argued, their legs tense or move imperceptibly, they may even half hear the music or almost begin to yearn for the excitement of daring to ask a stranger to dance. However such imaginings can be contained. In hysterics, he argued, the normal process of reflecting and deciding is somehow bypassed and the image leads on to action. Imagined vomiting to real vomiting and imagined diarrhoea to real diarrhoea.

As such it is a psychological disorder. But as impulsive fancies and suggestions do not have this effect in all subjects, he did not entirely abandon the idea that there was something about the nervous system of some subjects that was necessary to the development of the condition. However, the primary root of the disorder he felt lay in the nature of consciousness.

If consciousness is, as it seems on the surface to be, some pure indivisible function, there is a problem as it is difficult to see why inhibitory associations should not form normally other than because of some degenerate nervous reflex. But if consciousness were a complex entity composed of multiple subunits, which are in turn conscious, and which has to somehow integrate ideas of self and systems of social belief, then it becomes conceivable that it might under certain circumstances "split" into component parts. Hysteria he felt was a malady of personal synthesis, in which ideas and functions that constituted the model of the self split - diss-associate.

It is not clear where Janet saw the dissociated elements of the self being located. He introduced the term, the subconscious, but by this he seems to have meant something akin to the older ideas about the depths of the soul. In contrast, Breuer and more particularly Freud were to argue for a subconscious that was a distinctly different layer to the rest of consciousness - something subterranean rather than just split off from awareness.

BREUER ON HYSTERIA

In 1880, at the age of 21 a young girl, known to psychology as Anna O began to suffer a series of complaints. These included paralysis and loss of sensation, especially on her right side, sporadic loss of vision and of hearing, a seeming inability to speak her native German although she could still converse in English and periods of "absences", for which she showed no recollection afterwards. Her absences appeared to involve a change of personality, confusion and hallucinations. These afflictions began, when she was nursing her father who was terminally ill.

For almost two years afterwards she was treated by Josef Breuer, who saw her virtually every day and for increasing lengths of time each day. She fascinated him. He diagnosed hysterical double personality disorder in a girl from neuropathic stock. What was particularly interesting was that Anna O under hypnosis began to tell Breuer about the history of each of her symptoms in reverse chronological order. When they had appeared and how they had affected her. For hearing alone, she could recall 303 separate occasions of difficulty. Each of them appeared to begin in a moment of conflict about or fright because of her father. When she worked her way back through all occasions of difficulty to the point of origin of each symptom, it disappeared.

Some years later Breuer and Freud became close colleagues. Breuer's account of the Anna O case particularly intrigued Freud. In 1885, Freud went to Paris on a travelling fellowship to study under Charcot, who at the time was the preeminent authority on hysteria and hypnosis and who in 1885 was working on the question of the traumatic neuroses. He subsequently went on to visit Bernheim after which he returned keen to collaborate on the issues raised by Anna's case.

From 1889 to 1892, Freud saw a number of cases of hysteria. He persuaded Breuer to join him in writing up four of these Emmy von N, Lucy R, Katherina and Elizabeth von R. along with the case of Anna O and in formulating a theory of hysteria. This resulted in 1893 in the publication of **On the psychical mechanism of hysterical phenomena: preliminary communication** and in 1895 the publication of **Studies on Hysteria**, in which they concluded that hysterics suffer from reminiscences.

In the Studies on Hysteria, the chapter attempting to outline a theory on the origin of hysteria was written by Breuer. He compared the self to an electrical grid, in which the level of energy has to be kept relatively constant and evenly distributed. Like an electrical circuit faults are liable to develop if there is a weakness in a particular wire, whether through some toxin, some hereditary factor, some abnormal input (from a diseased organ for example) or because of malnutrition or exhaustion. Another possibility, if 2 adjacent wires were close together, is that there might be a short circuit.

Faults, he believed were particularly likely if excitation in the circuit was excessive. This could happen in cases of sexual or traumatic inputs. It could happen, when excitation cannot be discharged, as for example when anger is felt but cannot be expressed or when there are two irreconcilable ideas present in the mind at any one time. For example when a married woman finds herself lusting after another man or an adolescent thinking positively about dedicating his

life to some high moral goal, suddenly remembers that he was masturbating only half an hour before. Normally affects, ideas, and vegetative functions such as digestion or respiration are kept apart, Breuer argued, but in some cases one could get an affect or idea short-circuiting into the digestive or other vegetative system causing palpitations or nausea for example. Irreconcilable ideas cause these physical symptoms, Breuer felt, in much the way that being on a boat produces irreconcilable conflicts between optical and balance senses - and hence nausea.

However, Breuer argued that one further mechanism must also play a part in most cases of hysteria - dissociation. On this he was very close to Janet's position and was ultimately to differ profoundly with Freud. Breuer argued that typically we all have affects or ideas that are either incongruent with our self-conceptions or in some way traumatic. Normally, these wear away through a process of being gradually integrated in the network of other associations. For example, the wedding night is often very traumatic for a woman. Regarding wedding nights and sexual assaults in general, Breuer commented that physicians would be unwise to rule out the possibility of their causing subsequent problems as we have "no idea what sort of symptoms an erection calls forth in women, because the younger ones refuse to say and the older ones have forgotten". But as subsequent sexual relations build up a fund of benign associations and as anxiety subsides letting prior associations surface during sexual contact, the woman is able to work through the potential block.

This however cannot happen if the traumatic memory is isolated from the rest of our associations - if it cannot make associative contact. Freud argued that traumatic memories become isolated through repression - we do not want to remember. Breuer argued that they become isolated through dissociation - we cannot remember.

Any form of preoccupation, Breuer argued, can lead to absent mindedness, which is the basis of dissociation. For example, when concentrating hard at work or being creatively imaginative, individuals can be quite insensitive to what is going on around them. This he argued is healthy as the energy being generated is utilised. So also are twilight reveries as there was little psychic energy involved. But if in the course of a reverie, some worry or memory of a lover or some other emotional material should arise, it might capture the mind, suck in all the surrounding psychic energy and be incapable of discharge other than through some short-circuit type of process.

This is similar to what happens in hypnosis, Breuer argued, where one idea becomes dominant. It is also what happens in anxiety, when a danger can flood the mind with just one idea, inhibiting all else. Or equally in orgasm. Here he suggested we see an extreme degree of emotion, accompanied by a restriction of consciousness, that is comparable to a self-induced hypnosis. When reverie is the origin, dissociation is liable to happen to those who are care-ridden - watching at a sick bed as in Anna O's case - or to those who are in love. Reverie in this case is quite comparable to an auto-hypnotic procedure. The effect of dissociation is to inhibit subsequent reminiscence, just as after hypnosis subjects are amnesic for what has happened them.

Comparing this to Janet's model, and being even more community oriented than Janet, Breuer suggested that Janet's notion that splitting happened in weak individuals probably stemmed from his seeing too many patients who had been institutionalised. In contrast, Breuer and Freud's clientele were mainly young well educated women from the upper strata of Viennese

society. Based on this sample, Breuer felt sure that anyone could get the type of hysteria that he and Freud were seeing and that indeed many hysterics were more gifted than the average.

FREUD ON HYSTERIA

Before 1890, Freud, like everyone else, saw all neuroses as arising from an actual disorder of the nerves. In common with many others, he believed that the actual disorder was caused by a toxic effect of disturbed sexuality on nervous functioning - consequent on coitus interruptus or masturbation, for example. In the case of anxiety this was betrayed by the fact that the symptoms, such as palpitations, breathlessness and fatigue were all concomitants of the sexual act. In neurasthenia, as the predominant symptom was lethargy, this pointed to excessive self-abuse. Dysmenorrhoea was also thought to arise from excessive masturbation. References to patients' masturbatory practices and methods of contraception pepper Freud's early works. Given the actual nature of the neurosis, while hypnosis might be useful the idea of catharsis under hypnosis would not be expected to be of much use.

In attempting to account for hysteria, Freud's first difficulty was the close association between hysteria and hypnosis put forward in Paris, following the work of Briquet, Burq and Charcot, according to which hysterics were particularly susceptible to hypnosis. The **Studies on Hysteria** do not suggest that Freud was a particularly subtle hypnotist. Whether or not this was a fateful quirk of personal style, he found that not every hysteric was hypnotisable - by him. Accordingly, the theory that hysteria arose by some sort of auto-hypnosis, during states of altered consciousness as proposed by Breuer, seemed less tenable. In addition, it seemed that a number of non-hysterical patients, with obsessive-compulsive disorder for example, were hypnotisable. Furthermore, he found that even under hypnosis many patients appeared able to defend themselves against remembering buried trauma.

This led to the idea that, far from an inability to remember a buried trauma, the issue was more one of reluctance to remember. From around 1892, he began to see hysteria, obsessive-compulsive disorder and paranoia as neuropsychoses. Unlike the actual neuroses, these neuropsychoses involved some buried memory. Catharsis was therefore the appropriate method of treatment. As in the actual neuroses, he maintained that the origin of these disorders was sexual. In view of Breuer's remarks regarding the role of sexuality in hysteria, noted above, and the longstanding association of hysteria with sexuality, this could not have been an unusual proposal for the time. But the precise nature of the sexual precipitation proposed by Freud for hysteria was highly controversial.

Aetiology of Hysteria

Freud claimed that the psychoneuroses all resulted from inappropriate sexual exposure of some sort during childhood. In Aetiology of Hysteria, he argued that the exposure was in the form of assaults. Assaults most commonly perpetrated by the father. Incest. These were events that involved shame or guilt and accordingly, the victims would not want to remember them. This distaste therefore would give rise to a defence against the memory. In other words the trauma or ideas, that gave rise to hysteria, did not do so simply because they were received, while the subject was in a particular state of consciousness, as Breuer suggested. Rather it was the non-integratable nature of the event that lay behind the condition.

In distinguishing the psychoneuroses from the actual neuroses, a distinction based on the capacity of remembering to cure the psychoneuroses, he was left with the need to find an aetiology for hysteria. This necessitated a traumatic aetiology. But unlike Charcot's traumatic

neuroses, not all Freud's sample of 18 patients had near accidents. On delving deeper into their psyche, however, it seemed to him that all had sexual traumata from early childhood. Such an aetiology, in contrast to a more neutral trauma, such as a near accident, suggested that the principal psychological dynamic leading to hysteria was a repression, owing to distaste, rather than dissociation. What was repressed, he claimed, were the details of the incestuous assault.

This was a controversial position to take. No one else, it seems, was prepared to support him in this. But whether it was the claim regarding incest or the claim that all hysterics had been sexually abused, that met with resistance has been the subject of much recent controversy. As mentioned in chapter 1, the existence of child abuse, including sexual abuse, had been extensively documented by the forensic physician, Ambroise Tardieu, in 1860. Freud, it is known had copies of Tardieu's works. Furthermore, it seems probable that while in Paris, with Charcot, he attended autopsies on children who were murdered by their parents or relatives, having been previously chronically abused. It is possible, therefore, that a claim that some cases of hysteria had resulted from sexual abuse would not have caused problems. Freud, however, operating according to the scientific dictates of the day and taking a very medical approach, appears to have always thought that specific clinical syndromes required single specific aetiologies. Therefore, if there was clear evidence that some cases of hysteria arose in a particular way, all must do so if what was involved was going to be a process governed by the iron laws of science.

In the case of hysteria, he argued that the specific form of the sexual assault gave rise to the variations in the clinical picture. Thus, pain on micturition or hysterical retention of urine arose directly because of an association with forced penetration. Hysterical diarrhoea or painful defecation resulted from anal penetration. Choking and vomiting from oral sex. The hysterical crisis developed because of an awakening of associations. The recalling of infantile scenes to consciousness resulted in the most painful suffering and violent sensations.

The reproduction of the traumatic scene, he argued, should lead to a subsequent correction of the psychical course that events took at the time. Anticipating criticism, he pleaded that his findings did not result from his suggestions to patients because he had never yet succeeded in forcing on a patient by suggestion, scenes he was expecting to find. Where he proposed possible sexual traumata that turned out to be incorrect, the patient invariably told him so.

Furthermore, both he and Breuer had found that reawakening the memories of the traumata produced the re-enactment of events that were astonishingly intact, possessed remarkable sensory force and had the affective strength of new experience. This seemed more like a reliving than a remembering. During therapy, patients would suddenly often switch from ordinary remembering to what seemed like a re-enacting of past scenes - in extreme cases, such as Steven, in the preamble, down to reproducing physical stigmata. Both Breuer and Freud thought that such a reliving could not have been counterfeited. This finding was also consistent with what other therapists, such as Janet, were finding. It is also consistent with what happens to subjects after traumata toda.

Freud argued that such effects could not be produced by suggestion. The same findings, he claimed, pointed to the validity of the methods he was using. His method, which he had begun to claim differed from hypnosis (chap 9), involved analysing the psyche, by following threads of associations through the labyrinth of memory, to reveal a story that made sense. If he had

simply suggested his own preconception to the patients, their story would not make sense, he argued. It would show clearly alien material inserted by him. In contrast, proceeding this way, when the final story came out, it turned out that its details explained unequivocally why the patient had the symptoms they did. However, if all this did not convince, in the final analysis the seduction theory was supported by a number of confirmed instances of childhood sexual trauma.

An Environmental Neurosis?

In carrying out this work we must of course keep free from the theoretical prejudice that we are dealing with the abnormal brains of dégénéres and déséquilibres, who are at liberty owing to a stigma to throw overboard the common psychological laws that govern the connection of ideas and in whom one chance idea may be exaggeratedly intense for no motive and another may remain indestructible for no psychological reason. Experience shows that the contrary is true for hysteria. Once we have discovered the concealed motives, which have often remained unconscious, and have taken them into account, nothing that is puzzling or contrary to rule remains in hysterical connections of thought any more than in normal ones.

S Freud: The Psychotherapy of Hysteria.

The seduction theory gave Freud the grounds to reject the notion that some sort of degeneracy lay at the basis of hysteria. Degeneracy theory would have implied that certain ideas might become intense or indestructible or certain associations might be made, for no obvious reason, but simply as a quirk of some aberrant reflex of the degenerate nervous system of the patient. Freud pointed instead to the logical nature of hysterics. While in one sense their clinical picture might be highly bizarre and on certain issues they might appear to act precipitately or injudiciously, the appearances were deceptive. Once one was in possession of all the facts, typically the behaviour of these individuals made eminent sense. In other words, the clinical picture told a story. Not being able to decipher the story pointed to the incompetence of the investigator rather than a failure of logic on the part of the story-teller.

While rejecting a model of the neuroses rooted in a degenerate biology, Freud thought that establishing the validity of his position depended on coming up with a biological theory that accounted for consciousness. What is mental life? Why are we aware of what we are aware of? We obviously have what is now termed a stream of consciousness but what exactly is a stream of consciousness. Finding an answer to this offered the promise of indicating why we are aware of some things and not others - why certain things are blocked from consciousness or at least from conscious expression. It was in an effort to answer these questions that he wrote his Project for a Scientific Psychology.

Project for a Scientific Psychology

This uncompleted document was found, after his death, among Freud's correspondence to his then collaborator Wilhelm Fliess. In it he attempted to use all the current developments in neurophysiology and neurology to account for the psyche. It was only when we really understood how the nervous system worked, he believed, that we would understand how repression occurred. The notions he made most use of were the reflex and the then recently introduced notions of the neuron (1891) and the synapse.

Until about 1830, the brain was seen as an amorphous sago-like mass containing granules of some sort, which some saw as the generators of electrical energy. This image fitted in with

prevailing views of the brain, which believed it to be a single equipotential entity - something spiritual which did not have parts. The first suggestion that there might be a detailed structure to the mass came from Ehrenberg in 1833. After Schwann proposed that living tissues were made up of cells in 1839, the idea of nerve cells was extended to the nervous system. The fibres connecting nervous cells were then seen as electrical cables, which were continuous between cells. Messages could therefore simply flow freely from one cell to another. It was also believed that impulses could hop from one cable to another, if the two cables ran closely together. Breuer's idea about dissociation depended on this kind of short circuiting.

Wagner in 1846 was the first to suggest that there might be junctions between nerve cells. What exactly happened when cell processes met was uncertain, as the microscopes of the day where unable to detect such fine detail. From about 1870, there were 2 theories, one that they were continuous which effectively led to the concept that the nervous system was a unitary network. The other was that there were junctions between nerve cells, later to be called synapses by Sherrington in 1897. This latter view opened up the possibility that there might be resistances to the passage of nervous messages, which Freud postulated might be the basis of a cordoning off of some areas of the brain from easy access.

In attempting to account for how the nervous system works, Freud supposed that it conserved energy - that is the energy used must be generated somewhere. It could not be just conjured up out of the blue. The principal generators were internal needs, drives and appetites. These led to a build up of energy levels in the system, which must be discharged in order to equilibrate the overall charge of the system. Failure to do so would be painful and unpleasant. Discharge, as in eating when hungry or copulating, when so inclined, was in contrast pleasurable.

However internal needs must be associated with external sources of gratification. The entry of associative material into the system was where the model became an 1890's (psychological science) rather than 1860's (philosophical) model. Impressions from outside could travel along a number of pathways in the system. Why should they go one way rather than another? In particular, why should certain associations issue in the symptoms of hysteria?

The answer he gave depended on the synapse. This he saw as a barrier to communication between neurones, that could be worn down by the flow of nervous impulses through it. The differing strengths of various barriers to a particular impression determined, he argued, the path that would be taken by that stimulus. The strengths of the barriers would depend on the activity in surrounding neurones. In his system, these neurones each represented an association, or memory. If the resistance to an impulse was high, it would be channelled off in some other direction, even to the point where its eventual discharge might be highly inappropriate.

The distinctive feature of the project compared to other neurologically based hypotheses of the time was that Freud did not turn to the concept of a degenerate reflex of any sort to extricate himself from difficulties. He attempted instead to provide a model, whereby external events might lead logically to internal pathologies. Unfortunately, such a project could not be sustained on the basis of the available knowledge of the day. It required as Freud himself admitted too much "constructio ad hoc" and it collapsed unfinished under the weight of speculation.

Its other significant feature was the crucial biological reduction Freud effected - the equation of one nerve cell with one memory/emotion. This was a step Janet resisted, arguing that one psychological unit never simply correlates with one biological unit. Until quite recently, Freud's position on this, which he never abandoned, would have been the more scientifically orthodox. Indeed, in many ways it resembles some of the latterday behaviourist formulations. This sailing close to the headlands of biology gave him an advantage over Janet that has proved fateful for the development of psychological medicine.

3 THE HAZARDS OF INTERPRETATION

From 1893 to 1896, Freud's activity was extraordinary. He wrote most of the studies on hysteria, articles on the neuropsychoses of defence and the aetiology of hysteria, as well as the Project. During this time he was seeing patients constantly and breaking new ground repeatedly, as the sheer enthusiasm of his writing at this time suggests. He was at this time, according to Ferenczi, lying down on floors beside patients for hours on end chasing down therapeutic leads.

The abandonment of degeneracy opened the way to the first formal psychodynamic paradigm. While Breuer and Janet, were arguing for something very similar, Freud was the first to make a clear break with the past and establish that certain traumatic events might have psychological rather than neurological or spiritual consequences. This is brought out most clearly in one of Freud's contributions to the Studies on Hysteria, entitled the psychotherapy of hysteria, which I believe now reads as the most modern of all his writings. In this he described the technique he was then using.

In these circumstances I make use in the first instance of a small technical device. I inform the patient that, a moment later, I shall apply pressure to his forehead, and I assure him that, all the time the pressure lasts, he will see before him a recollection in the form of a picture or will have it in his thoughts in the form of an idea occurring to him; and I pledge him to communicate this picture or idea to me, whatever it may be. He is not to keep it to himself because he may happen to think it is not what is wanted, not the right thing, or because it would be too disagreeable for him to say it. There is to be no criticism of it, no reticence, either for emotional reasons or because it is judged unimportant. Only in this manner we shall find it infallible. Having said this, I press for a few seconds on the forehead of the patient as he lies in front of me; I then leave go and ask quietly, as though there were no question of a disappointment: 'What did you see?' or 'What occurred to you?'

This procedure has taught much and has also invariably achieved its aim. Today I can no longer do without it. I am of course aware that a pressure on the forehead like this could be replaced by any other signal or by some other exercise of physical influence on the patient; but since the patient is lying in front of me, pressure on his forehead, or taking his head between my two hands, seems to be the most convenient way of applying suggestion for the purpose I have in view. It would be possible for me to say by way of explaining the efficacy of this device that it corresponded to a 'momentarily intensified hypnosis'; but the mechanism of hypnosis is so puzzling to me that I would rather not make use of it as an explanation. I am rather of the opinion that the advantage of the procedure lies in the fact that by means of it I dissociate the patient's attention from his conscious searching and reflecting - from everything, in short, on which he can employ his will - in the same sort of way in which this is effected by staring into a crystal ball, and so on. The conclusion which I draw from the fact that what I am looking for always appears under the pressure of my hand is as follows. The pathogenic idea which has ostensibly been forgotten is always lying ready 'close at hand' and can be reached by associations that are easily accessible. It is merely a question of getting some obstacle out of the way. This obstacle seems once again to be the subject's will, and different people can learn with different degrees of ease to free themselves from their intentional thinking and to adopt an attitude of completely objective observations towards the psychical processes taking place in them.

What emerges under the pressure of my hand is not always a 'forgotten' recollection; it is only in the rarest cases that the actual pathogenic recollections lie so easily to hand on the surface. It is much more frequent for an idea to emerge which is an intermediate link in the chain of associations between the idea from which we start and the pathogenic idea which we are in search of; or it may be an idea which forms the starting point of a new series of thoughts and recollections at the end of which the pathogenic idea will be found. It is true that where this happens my pressure has not revealed the pathogenic idea - which would in any case be incomprehensible, torn from its context and without being led up to - but it has pointed the way to it and has shown the direction in which further investigation is to be made. The idea that is first provoked by the pressure may in such cases be a familiar recollection which has never been repressed. If on our way to the pathogenic idea the thread is broken off once more, it only needs a repetition of the procedure, of the pressure, to give us fresh bearings and a fresh starting-point.

On yet other occasions the pressure of the hand provokes a memory which is familiar in itself to the patient, but the appearance of which astonishes him because he has forgotten its relation to the idea from which we started. This relation is then confirmed in the further course of the analysis. All these consequences of the pressure give one a deceptive impression of there being a superior intelligence outside the patient's consciousness which keeps a large amount of psychical material arranged for particular purposes and has fixed a planned order for its return to consciousness. I suspect, however, that this unconscious second intelligence is no more than an appearance.

This instructing patients to tell him what they could see in their mind's eye, irrespective of whether it seemed appropriate or not or whether it was agreeable to do so or not marks the critical discovery of the psyche. The issues are not simply historical in that the difficulties his patients found are ones that every reader of this book will find if they try out the procedure on themselves or a friend. What you will see is someone who is obviously seeing more than they can say or are prepared to say. (Or hearing some internal monologue they are not happy to have overheard). It is just these difficulties that psychological medicine appears to have returned to in the course of the past decade.

While Freud's specific position on the aetiology of hysteria was never well received, the general impact of this work was extraordinary, leading to a complete revolution in the meaning of the term neurosis. After 1895, it came quickly to mean a disorder of the psyche, in the presence of a normal nervous system, with the terms neuropsychosis and psychoneurosis being abandoned as unnecessary.

The scale of the revolution can be judged by reference to one of the major textbooks on mental disorders in use at the time, Esquirol's **Mental Maladies**. In this, the first authoritative textbook on mental disorders, published in 1845, Esquirol noted that "the doctrine of crises is as ancient as observation in medicine - the cure of mental maladies is only deceitful or temporary, when it is not determined by some critical phenomenon - but the crises of insanity [have] been imperfectly understood or neglected". The reader awaits a discussion of the issues of catharsis or abreaction at this point, of the role of resistance to insight being overcome in a moment of crisis. But instead Esquirol goes on to the cure of insanity following the outbreak of boils or shingles, the contracting of a fever or either getting pregnant or giving birth. He notes that dentition can cause insanity.

Against this background, which was still the orthodox view in 1890, Freud and Breuer's discussion of the role of abreaction and catharsis in the termination of mental maladies marks a radical change. Equally, however, the term catharsis was being used in a novel way. It previously had been used to refer to the culmination of a tragic sequence of events or the resolution of a moral dilemma. Prior to Breuer and Freud, it had never been used to indicate how a psychological problem might be resolved.

Yet by 1897, Freud had abandoned the seduction theory, which was the capstone of all his thinking at that point and which apparently also offered the experimental evidence in favour of the validity of his therapeutic methods. Why?

Furthermore, with the abandonment of the seduction theory, he was also to abandon the notion of an environmentally precipitated neurosis and to put in place of previous notions of a degenerate nervous system, the idea of a degenerate psyche. Why?

PSYCHOANALYSIS & THE TRANSFORMATION of THE PSYCHE

Some imaginations ... differ in that our will is not employed in forming them... They only arise because the spirits agitated in various ways and coming upon the traces of various impressions which have preceded them in the brain, haphazardly take their course through certain of its pores rather than others. Such are the illusions of our dreams and likewise our waking reveries.

Descartes' The Passions of the Soul: Article 21.

There were a number of problems with the seduction theory. In the first instance, the neuroses rarely started in childhood. There was, Freud believed, little or no symptomatology in childhood itself in response to the proposed traumatic assaults. This, Freud argued, was because children were essentially non- sexual beings, which led to there being minimal immediate effects. But the memory of the assault was stored, to be activated later by the sexual awakening of puberty or by further shocks; these latter did not have to be sexual. He gradually became aware of the untenability of his position on the non-sexual nature of children, by virtue of his collaboration with Fliess, who was a pioneer in the field of infantile sexuality.

Secondly, he proposed that traumatic experiences gave rise to all the psychical neuroses - hysteria, obsessive-compulsive disorder and paranoia. But why should one act lead to 3 different outcomes. The reason Freud had offered was in terms of the stage of childhood development that the provoking incident occured at. Thus, sexual advances up to the age of 4 gave rise to hysteria, between 4 and 8 to obsessive-compulsive disorder and between 8 and 12 to paranoia. As the child aged it was less likely to be assaulted by a sexual encounter and more likely to take some degree of pleasure in it, which then had to be defended against, giving obsessive-compulsive disorder, or even to form an attachment to the perpetrator, leading to paranoia. These distinctions were not easily sustainable.

Thirdly, the theory implied a remarkable amount of child abuse in the community and even in his own family - given what he saw as hysterical tendencies in his brothers and sisters. The question of the actual incidence of child abuse has only resurfaced recently. It now appears to be startlingly common, particularly so in the childhood of individuals with nervous disorders.

Fourthly, using the cathartic approach, his success rate was not all that the seduction theory would have predicted. There were three problems - not enough patients got well, too many left therapy and of those who got well a number relapsed. This latter point touches on a number of key issues, which will be taken up in more detail later.

Finally, Freud began to be uncertain about the distinction between truth and fantasy in the material provided by some patients. This was an inevitable outcome of the technique of asking patients to tell him what they could see in their mind's eye. Simply recalling, for example, a stressful interview should bring home this point. Reseeing it in our mind's eyes afterwards, all of us edit it, alter it radically, see ourselves saying what we wish we had said rather than what we did. This gets replayed many times and often leads later to an inability to be certain about what actually did happen.

But Freud was to put another interpretation on the phenomenon. One day, one of his patients turned to him and embraced him. He later explained this away by arguing that what had happened was that she was beginning to remember a former episode, in which she had been talking to someone she desired and whom she was hoping at the time would turn to her and sweep her off her feet. The memory of the desire, Freud argued, returned stripped of historical context, which came later, leading to her advances towards him. So also, he argued, was it not possible that other deep wishes might emerge and attach themselves to the most convenient material - parents, especially fathers?

In this manner, he discovered fantasy. He later came to see indications of early exposure to sexual material as confusing rather than illuminating the analytic picture. They firstly misled investigators from the nature and function of sexual fantasy, orienting them instead toward supposed real life events. They also had made both Freud himself and many others overlook the true origin of the neuroses, which was more apparent, he later came to think, in non-traumatic cases.

Putting all of these elements together, he came to the conclusion that hysteria was a defence against an impulse rather than against a memory. That the accounts of hysterics were fantasies rather than remembrances.

Emma Eckstein

In a controversial book, Jeffrey Masson has argued that this change in Freud's thinking can be charted through his changing attitudes to the statements of a patient of his, Emma Eckstein.

Emma came to Freud, shortly after he had become estranged from Breuer. The precise nature of her complaints is uncertain. Masson has argued that he saw Emma's problem as an actual neurosis - probably the result of too much masturbation. After the split with Breuer, Freud's closest collaborator and friend was a Berlin otorhinolaryngologist, Wilhelm Fliess. Fliess believed that there was an intimate connection between the genital system and the nose. This led him to treat actual neuroses by applying a recently discovered local anaesthetic, cocaine, to certain key points of the nasal mucosa. Cocaine anaesthesia brought about temporary improvement. The improvements led Fliess to conceive of a more radical therapy involving removal of part of the turbinate bone of the nose. This should lead, he thought, to permanent rather than temporary cures. Freud volunteered Emma for the operation.

Post-operatively she began to bleed profusely. A local surgeon was called in and found that Fliess had left a considerable amount of gauze packing in the nose by accident. An accident that would have then as now have led to claims for negligence. There followed a few weeks during which Emma bled episodically. The bleeding to judge by Freud's distressed letters to Fliess seems to have been quite torrential. However, far from blaming Fliess for the mishap, over the course of a few months, Freud worked the material around and came up with the explanation that Emma had been bleeding out of her longing to see and affect Freud himself. The first bleed had occurred with him there - the fact that gauze had just been removed was, he proposed, incidental. When she saw the effect this had on him, Freud argued, she later bled in order to bring him to her and to affect him similarly again. Therefore, Emma herself was responsible for the bleeding.

Reading Freud's letters to Fliess at this time is highly embarrassing. It is almost impossible to have sympathy for Freud, except in so far as he seems in these pages to have been at the time very worried, isolated and somewhat naive. This isolation would certainly have been mitigated by a change of position regarding incest and the sexual assault of children of the kind that he seemed able to manage in the case of Emma - that they like Emma were not simply innocent victims but somehow willed their own problems.

Fliess and Infantile Sexuality

Freud was a late convert to the facts of infantile sexuality rather than their discover. At the time that he was arguing for a seduction theory of hysteria, on the basis of the disruptive psychological effects of sexual assaults on prepubertal, essentially nonsexual children, both Albert Moll and Havelock Ellis were recording childhood manifestations of sexuality and its polymorphous character. Ellis in particular noted both oral and anal stages in sexual development. The facts of sexual perversity had also been pretty well established, in great part as a result of the pioneering work of Kraft-Ebbing and Havelock Ellis.

As regards infantile sexuality, it was Wilhelm Fliess, later to be Freud's collaborator and friend after the rift with Breuer, who made the most novel observations. Fliess noted the presence of a sexuality that was not just the passive "sexual" pleasure of sucking at the breast. Rather he recorded a more active sexual organisation that displayed itself in the presence of erections from the first few weeks of life onwards. This sexuality appeared to develop insistently thereafter, in a way that posed constant fresh challenges to children. It was through Fliess that Freud came to realise that the sexuality of children was something quite different and more dynamic than he had hitherto thought.

Along with the notion of infantile sexuality, Freud borrowed from Fliess the idea of dynamic development. Fliess had argued for the presence of a sexual dynamic in all children from birth. This dynamic was supposed to result from the operations of both a masculine and a feminine factor; the former having a period of 23 days and the later of 28 days. All individuals were bisexual, he argued, but one or other of the sexual factors came to predominate, with the other being repressed to form the nucleus of the unconscious. The male factor was thought of as being the inherently active one and corresponds closely to what Freud thought of as libido - or sexual energy.

As Fliess saw it sexuality developed in a manner governed by the harmonics of a periodic system. This led to infants and children being propelled through developmental stages at the insistence of a burgeoning sexuality. In childhood, Fliess argued, the energy of this dynamic is

not normally spent on sexual activity but is sublimated and converted by a process of reaction formation into the material from which higher cultural achievements are derived.

Although not endorsing all of these points, Freud took on board many of Fliess' insights. In particular, he realised that the handling of developing instincts was no less a potential source of later psychosexual disturbances than exposure to an act of seduction. In 1897, he formally abandoned the repressed trauma theory he had held and replaced it with a psychology of repressed impulses. These impulses developed in a manner that was relatively independent of what was happening in the environment. Their development had to be integrated within the rest of the individual's personality and their handling, he proposed, could have an even more pervasive effect on the psyche than memories.

In taking this step, Freud moved from a position which stressed the overriding importance of environmental determinants in psychological problems to one which recognised a primary endogenous input to such problems. It was aberrations in the development of the sexual instincts, he held, that were the necessary and specific causes of the later generation of psychopathology, although environmental stressors or traumata might provide triggering or concurrent causes. This in effect was a turning back to a degeneracy model of the neuroses, in which the individual and their personal development was to be held responsible for their own disorder.

Psychoanalysis became the study of the psychological management of instincts and how this management governed the development of the personality. For example, Freud developed a psychological explanation for the marked latency period that occurs between the ages of 5 and puberty, lying between periods of relative sexual turmoil, which seemed difficult to explain in purely biological terms. This lay in the genesis and resolution of the Oedipus complex. Given the unattainability of the desired sexual object (the mother) and the likelihood of castration in the event of trying, the natural resolution of an Oedipus complex would be for the child to identify with his father and to sublimate his libidinous impulses into other activities. Furthermore, a reaction formation against things sexual would also be promoted. Where once there was interest and excitement, there would develop an apparent lack of interest and disgust. These banks erected around the sexual tide would contain the problem until such time as the river rose much higher and burst its banks - as at puberty.

After 1897, the unconscious for Freud became the repository of innate sexual impulses which have been repressed because of their incompatibility with a normal adult psychosexual organisation. Such an unconscious, it should be noted, is something quite different to the forgotten or partitioned off memories, which he had formerly thought afflicted hysterical subjects. It is also something radically different to the depths of the soul model of the subconscious put forward by Janet. It was, however, quite congruent with the reflex models of nervous system functioning outlined in chapter 1.

How these impulses have been managed determined, he argued, the future psychological normality of the individual. Several difficulties could arise. One is that a child might fixate at an inappropriate developmental stage. This Freud conceived as occurring in much the same way as cells during embryological development may fixate at the wrong place. Typically, during intrauterine life, cells have to migrate over considerable distances to take up their final resting places. The introduction of a stressor or a toxin during this process, or a fault in the genetic

programme, can lead to an incomplete migration, with the result that things grow in the wrong place or not at all.

It was by this mechanism, he argued, the sexual perversions arise. In infancy everything can give sexual pleasure - the mouth, the anus, the entire skin. This undifferentiated sexuality is however progressively given up, as the child matures toward a genital sexuality. Under outside pressure however or the influence of hereditary factors combined with such factors, Freud argued the child could fixate at an earlier and, from the adult point of view, a perverse sexual stage.

Alternatively, sexual maturity might be attained with one or two weak links left in the developmental chain. Under pressure, in such a case, the individual would be liable to regress. The regressive pull or intimations from an inadequately handled previous stage gave rise, he argued, to neurotic anxiety.

Before discussing the further development of psychoanalysis, it should be noted that there **are** two sexes in each of us and our sexualities do interact with stress responses. In the late 1890s adrenaline and cortisol were discovered and subsequently shown to be central to the stress response. In the late 1920s, the urine of women was found to contain 2 substances, which varied in concentration periodically in line with menstruation - oestrogen and progesterone - and the urine of men to contain a male principle, testosterone. While Freud and Fliess might have been stumped by the existence of 3 sex hormones, they would had felt vindicated by findings that both oestrogen and testosterone are present in substantial amounts in both men and women. These various hormones act to maintain the integrity and vitality of gonadal functions. They also act in concert with what is termed the autonomic nervous system - an unconscious, automatic system, which meets many of the requirements of Freud's Id and is subject to the influence of an endogenous rhythmicity, which can legitimately be seen as a repository of unconscious knowledge.

Thus there is nothing inherently unscientific about concerning oneself with issues of an Id comprised of instinctual forces, subject to periodic fluctuations. It must also be remembered that in postulating such an Id, Freud did seem to offer an explanation for a number of puzzling psychological events. For example, the facts of infantile sexuality such as the obvious and frequent erections boys have around the ages of 2 - 4. His theory plausibly linked these empirical events and the phenomenon of childhood amnesia - the fact that children seem unable to remember much if anything of what happened them before the age of 3 or 4.

Indeed in 1900 when Freud was grappling with these issues, he was working at the forefront of the biological sciences of his day, just as he had been when constructing the Project for a Scientific Psychology. It was just this, which so marked him out from Janet and other psychodynamic approaches.

THE RECOURSE TO SYMBOLISM

Freud's turn from buried memories to unconscious impulses had profound effects when it came to interpreting the imagery we all see in our minds' eye. This becomes clear when we consider his psychoanalytic theories on the interpretation of dream imagery. Whereas previously his concern had been to establish what exactly was in the mind's eye, the focus now switched to one of demonstrating how the imagery of dreams fulfilled unconscious wishes.

It is not immediately clear that dream imagery does reflect unconscious wishes or if it does, it is less than clear just what those wishes are. Freud argued that dreams could fulfil multiple wishes from many stages of development. In response to this, his critics questioned how the primary meaning was to be established. He replied that the true significance of dreams lay in the extent to which they re-enacted infantile wishes. The fulfilment of other wishes derived resonance from the primary wish fulfilment or acted as a screen to detract notice from the primary activity of the dream. In order to maintain his point he was happy to interpret dreams forwards, backwards or sideways or to let every element of a dream stand for its opposite, if such an interpretation would yield the expected result.

Even so some dreams did not yield up their sexual content. In attempting to account for these cases, he took his most radical step. This was to argue that the unreducible material must stand in a symbolic relation with libidinal forces. This recourse to symbolism was to have the most profound effects on our understanding of the psyche. It was, I believe the step that more than any other has led to a profound alienation for many from their own psyches.

Summoning up the genie of symbolism from the interpretative bottle inevitably short-circuits the process of getting all the details of dream or any other imagery. Why spend hours or weeks trawling through a mass of detail, when with potential symbols lying all around, one can cut to the heart of what one knows, a priori, is the matter? Where abreaction had aimed at getting at the images that are lurking in the shadows and the full details of those images, the interpretation of symbols relegated concrete detail to a secondary place. If the reader dreams about pigs that fly, does it matter if the pigs have wings or if they, as it were, pass through the air rather than fly? A hundred books on dream symbolism pay no heed to distinctions such as these.

The central question here is from whence do symbols derive their meaning. If they are determined by the unconscious and all reduce pretty much to the same thing, an expression of erotic conflict, then details do not matter. If, however, symbols derive their reference from our social interactions with others, as I will argue in chapter 7, then the details matter critically.

A number of cases may help clarify what is at stake. In a recent contribution to a symposium on psychodynamics, Howard Shevrin described the case of A.M., who had a blood phobia. This he had had from the age of 9. His phobia had displayed itself dramatically, shortly before he sought help, while at the picture One Flew Over The Cuckoo's Nest, during the scene where one of the characters in the drama, Billy, a young, stammering weakling loses out in a confrontation with the boss nurse on the ward and slits his wrists. The sight of blood caused A.M. to flee the cinema.

Shevrin and colleagues decided that this episode and other details of A.M.'s history could best be interpreted in terms of difficulties with sadomasochistic impulses towards women, derived from a sadistic mother for whom he nevertheless yearned. The fear of blood, they argued, arose out a conflict over sadistic wishes toward women and the need to defend against such wishes. It symbolised this conflict in a manner that led to the wished- for bloody attack being externalised, which allowed the patient to flee from a representation of his impulses and transformed him into a weakling. The scene in the movie produced the behaviour it did by bringing his primal conflicts close to the surface.

This raises the central issue. Do the contents of our consciousness, the images in our mind's eyes, have this particular kind of symbolic reference, whose meaning is ultimately to be derived from certain predetermined patterns? Psychoanalysts and the majority of practising psychodynamic therapists appear to believe they do. This leads them often to ignore the full contents of what may be in my or your mind's eye, if they catch sight of some element of our imagery that might stand in an appropriate symbolic relation with the kind of interpretation they are programmed to make - even before they meet us.

The paradox that develops, at this point, is that while the things in our mind's eye may never be what they seem to be, the process of interpretation is not for analysts today the hazardous enterprise it was for Freud in 1893-1896. What for some of us is a marvellous diversity of social meanings and nuances, full of endless interpretative possibilities, reduces to a particular common denominator - for example, the Taj Mahal with its twin turrets and the strip of water in its forecourt becomes a representation of female sexuality. This interpretation is confidently offered by Western analysts, who may otherwise know nothing of Indian culture and social conventions.

This extension of analytic interpretations to art was inevitable as taken to its logical conclusion, there would seem no reasonable way to claim that neurotic imagery has a particular symbolic reference while denying the same underlying meaning to the imagery and symbolism of art. This extension of his theories was not one that Freud shirked and indeed much of the cultural force of psychoanalysis derived from making just such an extension.

But taking the hazard out of interpretation, in this way, is in itself hazardous. For example, Harold Klawans recently described the case of a girl who played the oboe, who found one day that she could no longer do so, although she could still sight read music and could appreciate the playing of oboes and other musical instruments by others. This perplexing complaint was deemed neurotic and led to her referral to an analyst, who discovered that at the time her difficulties started, she was also having problems with her sexual relations. As an oboe can be seen as a rather obvious sexual symbol, this led to an interpretation of her difficulties in terms of a neurotic displacement of sexual conflicts onto an inappropriate area of her life. It also led to a very lengthy analysis - which did not restore her ability to play the oboe. This was not surprising as a later brain scan showed that her inability to play the oboe stemmed from a small and specific stroke affecting an area of her brain responsible for the execution of musical acts.

What this case demonstrates is just how hazardous a recourse to interpretation in terms of symbolism can be. This is rarely conceded by analysts. But then again there is no hazard if one believes that the domain of reference of all symbols has been predetermined.

Little Red Riding Hood

The issues can be brought home and a glimpse of an alternative approach offered, if we consider the story of little red riding hood. Following Freud's line of interpreting myths, a number of prominent psychoanalysts have offered analyses of the various fairy tales. Chief among these have been Bruno Bettleheim and Erich Fromm. Their analysis of little red riding hood has become in recent years, through the fiction of Angela Carter and Neil Jordan's movie, The Company of Wolves, one of the best known and accepted of such interpretations.

Briefly, the red riding hood indicates a young girl on the verge of puberty; the bottle she carries in her basket symbolises her virginity; her mother's admonition not to stray from the path is an injunction against sexual intercourse; her visiting her grandmother is an Oedipal abolition of her mother. The wolf represents her Id and her father. The saving huntsman is her rational ego as well as her father also.

The analysts' contention is that interpreting this fairy story in these terms reveals the correct and timeless significance of the story. Their interpretations, like Shevrin's above, have some plausibility. The problem is that these interpretations cannot be correct. They are based on a fundamental inaccuracy, which is that the text used for these interpretations comes from the Grimm Brother's version, which is a corruption of the version that came down through the oral traditions of French peasants. The original version is given below:

Once a little girl was told by her mother to bring some bread and milk to her grandmother. As the girl was walking through the forest, a wolf came up to her and asked where she was going.
"To grandmother's house", she replied.
"Which path are you taking, the path of the pins or the path of the needles?" "The path of the needles".

The wolf took the path of the pins and arrived first at the house. He killed grandmother, poured her blood into a bottle and sliced her flesh onto a platter. Then he got into her nightclothes and waited in bed.

"Knock, knock."
"Come in, my dear".
"Hello, grandmother. I've brought you some bread and milk."
"Have something yourself, my dear. There is meat and wine in the pantry".
So, the little girl ate what was offered. As she did, a little cat said: "Slut to eat the flesh and drink the blood or your grandmother!"

"Then the wolf said, "Undress and get into bed with me".
"Where shall I put my apron?"
"Throw it on the fire; you won't need it anymore".
"For each garment - bodice, skirt, petticoat and stockings - the girl asked the same question; and each time the wolf answered, "Throw it on the fire; you won't need it anymore."

When the girl got into bed, she said:
"Oh, grandmother! How hairy you are!"
"It's to keep me warmer, my dear."
"Oh, grandmother! What big shoulders you have!"
"It's for better carrying firewood, my dear".
"Oh grandmother! What long nails you have?"
"It's for scratching myself better, my dear!"
"Oh grandmother! What big teeth you have!"
"It's for eating you better, my dear."
And he are her.

The issue of establishing why this is the original version is a matter for historians and is beyond us here. The point that concerns us is that recent historical scholarship enables us to arrive at

an original version. The significance of making sure one has the original version, in the case of little red riding hood, is clear in that there are no red hoods, bottles, admonitions or saving hunters in the original. Interpretation of elements of a story in terms of its symbolic qualities may be justified but if this is to be undertaken it would seem necessary to establish beforehand the correct version of the story to be interpreted.

Symbolism and Hysteria

It was just this difficulty in establishing what the correct version of the original story was in the case of hysteria that the analytic recourse to symbolism sought to avoid. Where once Freud had interpreted physical symptoms as standing in a direct relation to traumatic assault, with the abandonment of the seduction theory this was no longer an option. Instead, they came generally to be seen as standing in some symbolic relation to Oedipal conflicts. In contrast, Janet and Breuer's dissociative hypothesis accounted for such symptoms in terms of either a removal of consciousness from or a hyperawareness of physical functions, as for example when soldiers in the heat of battle are unaware of wounds they have sustained - a matter of angling spotlights and drawing curtains on the stage of consciousness.

We have seen that Freud moved to a position of recognising that the imagery of his analysands was a mixture of truth and fantasy and that these could not be distinguished. A moment's imagining should persuade the reader that reality based and fantasy-based imagery is commonly closely mixed in all our minds. But in the particular case of incest the source of the interpretative problems is unlikely to lie in such a mingling. While a memory may blur with time, an outright fabrication of sexual assault during childhood is unlikely to be fantasised. The fantasies, analysts appeal to in such cases, are "seen" by the individual. They are rather inferred from ordinary imagery by a process of symbolic reference - the validity of which is determined by the analyst alone.

As henceforth nothing was to be as it seemed, even clear statements of abuse based on the vivid remembering of actual seductions could be dismissed, by analysts. There was therefore a seachange as regards seduction, that reinforced the case against abused children. The question arises whose truth and whose fantasies were being indistinguishably mixed!

The alternative interpretative approach, which will be developed further in chapters 5, 7 and 9 is that what is in our minds' eye has no systematic ulterior symbolic reference. That things are what they seem to be but for some reason we are seeing an incomplete picture. That in some cases the spotlight of consciousness only illuminates a limited segment of the stage. The issue is why do we have an incomplete set of images. Would abreaction reveal more? Would angling the spotlight into the wings of the stage reveal more?

Both the illuminated area of the stage and the shadowy wings are within consciousness. Actors lurking in the wings are not subterranean creatures, whose existence can only be inferred symbolically. They are as much on the stage as those in the limelight and may even be heard moving about behind the curtain or be seen peeping out by some of the audience. When they enter onto the stage, their manifest appearance can be taken at face value, although the interpretation of their role and significance may be hazardous as drama is an enterprise, redolent with latent social meanings, none of which has unequivocal priority.

In contrast the psychoanalytic approach to these issues has involved the claim that the true significance of what is happening on the stage lies in the manipulation of the ciphers on the

stage by some mechanism lying beneath the floorboards. And it takes several years to training to learn how to detect what is under the floorboards!

Psyches and Minds

In constructing a psychology of repressed instincts which sought conscious expression in symbols, Freud moved beyond a psychopathological theory about the origins of mental illness to a theory about personality. He became more interested in the cultural significance of what he was doing rather than in the mechanics of getting people well. More concerned with the science of psychoanalysis than with dynamic therapy. He appears to have had less and less interest in damaged people (patients) and to have been less concerned with their lack of response to treatment.

One consequence of developing in this way was that Freud's previous focus on getting an accurate description of the scene in a patient's mind's eye gave way to a more general analysis of all aspects of the behaviour of the patient aimed at demonstrating what he, Freud, apriori knew to be the case. Interpretation was no longer going to be permitted to be a hazardous enterprise. However, unlike the analysis of imagery, a full analysis of behaviour inevitably involves accounting for cultural, social and religious inputs to behaviour.

Psychoanalysis, therefore, had to aim at being a comprehensive theory of everything rather than just a science of psycho-dynamics. It became a theory of the mind rather than a theory of the psyche. This development has led, I would suggest, to a general loss of feel for what a specifically psychological theory should look like. This point will be developed further in the following chapter, in which I will attempt to show just how inappropriate the extension of psychoanalysis into other spheres of life has been and also how contrary to our intuitive understandings of the psyche it has been.

4 THE ECLIPSE OF THE PSYCHE

All the struggles that people customarily imagine between the lower part of the soul, which is called sensitive, and the higher, which is rational, consist only in the opposition between the movements which the body by its spirits and the soul by its will tend to excite simultaneously.. But there is only a single soul in us and this soul has within itself no diversity of parts. The error which has been committed in having it play different characters usually opposed to one another arises only from the fact that its functions have not rightly been distinguished from those of the body to which alone must be attributed everything to be found in us that is opposed to our reason.

Descartes' Passions of the Soul: Article 47

Freud's recourse to symbolism left him open to the criticism of arbitrariness. The only way to avoid such a criticism is to establish what the ultimate meaning of all symbols is - if there is one. This, however, involves creating a theory of the human mind rather than just a theory that accounts for the dynamics of consciousness. Freud embraced this challenge. As a consequence, when one thinks of psychoanalysis today, one thinks as much of a theory that attempts to account for culture as one that accounts for neuroses: a theory that offers answers on the nature of religion, the origins of creativity, the true meanings of both works of art and advertisements and a theory that has polarised the scientific community like no other.

This extension into the humanities is perhaps what at one and the same time drove a wedge between the "science" of psychoanalysis and the remainder of the natural sciences and equally imposed barriers between psychoanalysis and the interpretative sciences. The reason for this was because Freud, while aiming at accounting for culture remained very much a biological psychologist. While the project for a scientific psychology was not a degenerate psychology, it was as biologically reductionist as it was possible to get. Far from moving away from such an orientation, in developing a psychology of instincts, Freud remained firmly in the biological camp, from which he drew support from the emerging theory of evolution.

Darwin

Darwin did not simply develop a theory of evolution. In elaborating evolutionary theory, he provided a new paradigm for biology, that established it as an autonomous science able to generate its own scientific agenda. Before Darwin, anatomy and physiology had been the only respectable biological subjects, as only they could be seen as investigating the organic components of a machine or the organic mechanisms by which the machine worked. It had not been respectable to touch on the issues of vitality or purposiveness. With the development of an evolutionary biology, it became possible to study behaviour, especially instinctive behaviour and its vicissitudes.

In the Project for a Scientific Psychology, as a hardnosed mechanically oriented scientist, Freud had attempted to construct an essentially physical/mechanical model of the mind but had run into insoluble problems. An evolutionary approach allowed him to ask the question why did this behaviour appear rather than just the question of what mechanical operation does it consist? This approach bypassed the difficulties in a mechanical approach, while remaining respectably scientific. It also specifically supported a consideration of the question of instincts and in particular the sexual instinct.

In evolutionary terms, there are two particularly important instincts - the will to survive and the urge to reproduce. But of these the reproductive instinct is arguably the more important. While Darwinism is often portrayed as a doctrine of the survival of the fittest, this is often misleadingly interpreted in terms of the acquisition of brute strength conferring an evolutionary advantage. In contrast Darwin himself pointed to the evolution of features such as the tail-feathers of the peacock, which far from promoting actual survival were more likely to hamper it. However, the function of a peacock's tail-feathers, he argued, was not to assist in any escape from predators but rather to attract the female. Survival of the fittest in evolutionary terms must mean the passing on of what we would now call genes and the survival of genotypes rather than the survival of any one individual - it will come down to sexual selection.

Under this selection pressure, Darwin argued, many "mental" attributes could be expected to evolve - such as courage, perseverance, intelligence, cunning as well as an appreciation of beauty (females appreciating a beautiful tail feather display). It was this role for sex in evolution, arguably, that led Freud to accord sexual libido a place of paramount importance in his theories, much to the mystification of others, such as Jung and Adler, who argued that sex could not be the ultimate determinant of human behaviour.

Freud was later called a Darwin of the mind by his biographer Ernest Jones. This was not just metaphorical. Freud saw the evolution of mental life as involving a struggle between instincts, affects and ideas for survival within the psyche. He even argued that the interplay of intellectual debate concealed a struggle between instinctual forces. He liked also to compare his achievement to that of Darwin, who had dethroned man from his exalted position within the animal kingdom, while he Freud, in turn, had dethroned the ego from mastery in its own house.

Haeckel and the Biogenetic Law

Darwin published his Origin of Species in 1859 but it was the later adoption of "Darwinism" by others rather than any wide reading of his book that led to the spread of his ideas. Indeed, the arguments of others were often heeded more than those of Darwin himself. Chief among these others was Ernst Haeckel.

Haeckel's General Morphology of Organisms appeared in 1866 and was shortly after labelled by Huxley, one of the most ardent proponents of evolution, as one of the greatest scientific works ever written. In Germany, and in Europe generally, Haeckel's reputation far outstripped that of Darwin. Writing the definitive history of biological thought in 1929, Nordenskiold commented that not only had Haeckel influenced more scientists that Darwin but that "there are not many personalities who have so powerfully influenced the development of human culture - and that too in many different spheres - than Haeckel".

However, while popularising evolution, Haeckel was actually advocating something quite different to Darwin. The essence of his belief was caught in the phrase, ontogeny recapitulates phylogeny. This became known as the biogenetic law. This states that the development of individuals (ontogeny) proceeds by paths already mapped out by earlier members of the species or even by earlier species in the evolutionary chain (phylogeny). That individual development remembers ancestral development.

Haeckel argued that the evidence for this view lay, firstly, in the similarities between other species and human embryos at different developmental stages, and secondly in the supposed

similarities between children and primitives. For example, human foetuses have gill slits at one point during intra-uterine development; Haeckel asked why? According to biogenesis this is because they are passing through (recapitulating) earlier evolutionary stages as they develop. As one of these stages in human development was aquatic, so it could be expected that at some stage the human embryo should show some remembrance of this. Other analogies between embryonic development and evolution were proposed, including an analogy between the just fertilised ovum and the earliest single celled organisms.

Far from being a fanciful idea, the biogenetic law was the height of scientific orthodoxy in embryology and palaeontology during the latter half of the 19th century. It appeared Ariadne-like to offer a thread for a latter-day scientific Theseus to successfully find a way through the labyrinth of prehistory. The hope was that by studying embryological stages and the developmental stages of children, more of the secrets of the past would be revealed than through the unearthing of all the buried monuments of antiquity or fossils. These secrets might include insights on the animal ancestry of man, as well as the origin of his mental, social and ethical faculties.

The biogenetic law was also consonant with the evolutionary ideas of Jean Baptiste de Lamarck, who before Darwin, had proposed a theory of evolution - but of a very different kind to Darwin's. Where Darwin had argued that the struggle for survival favours those who can adapt best to their environment and that thereby the appropriate adaptive mechanisms are passed on, Lamarck argued that organisms can acquire characteristics they need and that these can be passed on to their offspring. How else could the giraffe's long neck arise other than by repeated stretching to eat leaves higher up? For Lamarck evolution was a process driven by the internal needs of the organism. Without this, he felt evolution would be unintelligible. Darwin did not entirely reject this, although modern evolutionary theory does.

Haeckel and the Lamarckians argued that adaptations acquired during life were passed on terminal addition - the latest adaptive gain was added onto the end of the developmental sequence. However, this was liable to lead to developmental sequences that were inordinately long. It was therefore necessary that there should be some mechanism for condensing the sequence to a manageable length. Memory seemed to offer a suitable model for the kind of process that might be involved. Like memories, to-be-inherited characters were acquired in proportion to the intensity and duration of the originating stimulus. Like memories less relevant details could be forgotten, so that the overall outline of what needed to be remembered could stay roughly the same length. Like memories, what was once a conscious acquisition could become automatic and unconscious with repetition. In particular, it was argued, instincts are the unconscious remembrance of things once learned so strongly and impressed so indelibly into memory that the germ cells themselves were affected. They contain therefore the organism's memory of past history in unconscious organic form.

PSYCHOANALYSIS & THE BIOGENETIC LAW

It is at this point that biogenetic theory and the interests of Freudian psychology coincide. The general theory of evolution supported Freud's exclusive focus on sex. But the biogenetic law helped to provide a rationale for a number of the problems thrown up by this exclusive focus. I will deal with two of these, the question of repression and the development of the Oedipus complex.

In chapter 2, we noted that Freud parted company with Janet and Breuer on the question of dissociation. He argued instead that repression was the mechanism responsible for the production of the signs and symptoms of hysteria. While distasteful traumatic events were the supposed aetiological factor, this was quite plausible. But why repress pleasurable fantasies? On the other hand what did human embryos do to their gill slits if not repress them? It was this latter meaning of the term repression that psychoanalysis adopted. Confusingly so, for the rest of us. If repression operates in this way, we obviously cannot know what we have repressed. We would depend on archaeologists of the mind, digging down through earlier developmental layers, to tell us. It was just such a shift in meaning that put the emerging science of psychodynamics beyond the reach of the average individual.

As regards the Oedipal complex, while it might be plausibly involved in the psychological make-up of some individuals, could it really be involved in all cases? Freud took up the question of the origins of the Oedipus complex, in a series of publications from Totem and Taboo in 1913 to Civilisation and its Discontents in 1930. In these, he moved beyond a consideration of the dynamics within the individual psyche to a consideration of the problem on the level of the human species. Applying the biogenetic law to psychological development opened up the prospect that the developmental stages and conflicts that any one child passes through are predetermined by the prior experiences of the species. On this basis, he argued that the Oedipal complex, of desiring one's mother and fearing one's father, stemmed from historical events.

In the primal human horde, the older males would monopolise the females and restrict the access of younger males to them. This inevitably would lead to revolt and parricide. Far from solving the problem, parricide would lead to conflict among the conspirators and fratricidal conflict, the outcome of which would be ambivalence about the original murder. Therefore to solve the problem a compromise must have been reached at some point, whereby younger males emigrated to establish their own hordes. This led to the creation of the incest taboo. Furthermore, as a consequence of remorse, the slain father would have been installed as a totem godhead and lawgiver. Transgression against his laws would give rise to guilt. This scenario strikingly gave rise to something strongly resembling an Oedipus complex.

By virtue of the actual occurrence of such events on multiple occasions, Freud argued, the Oedipus complex had actually been inherited as a species memory. He also proposed that the development of totemism and the incest taboo were the point at which the apes became human. They were the first distinctively cultural acts set up to control animal impulses.

This line of thinking was developed further in Civilisation and its Discontents. Haeckel had proposed that sex was initially a function of the entire body of single or multi-celled organisms and that only later did a specific genital organisation develop. One of the later acquisitions was the importance of smell in sexual attraction. This operated through the release of chemo-attractants in the environment.

Building on this Freud argued that the evolution to an upright posture in man had inevitable mental consequences. In the first place, vision rather than smell would become the sensory modality of principal importance for reproduction. But as vision became important so also would it become apparent that the sexual organs were now exposed and visible by virtue of the alteration in posture. This would lead to shame and embarrassment. As smell became less important, its associations would undergo an organic repression (like gill slits) and smells that

formerly were pleasurable would now arouse disgust. These processes of sexual development and reaction formation, Freud argued could be noted both among primitive people and developing children.

Fanciful though such arguments may now seem, the incorporation of such thinking into psychoanalysis perhaps did more than anything else to make it the social force it later became. In the first place, many thought that it strengthened the clinical base of the theory. Now that instincts were to be seen as ancestral memories and the sexual instinct in particular as the engine of evolution, the developmental task of negotiating a path between the demands of instinct and the restrictions of modern society toward maturity could be seen as a truly dramatic one, prone to aberrations.

In developing in this manner, psychoanalysis acquired a cultural resonance that other theories of psychopathology lacked. Freud's formulations appeared rooted in the acceptable biological ideas of their day while accounting for many of the cultural myths of Judaeo-Christian civilisation.

An important implication of these formulations was that civilisation itself was a terminal addition to human evolution. Freud argued that as we have become civilised an increasingly large set of basic instincts have had to be repressed. Increasingly, therefore, there is the likelihood of inadequate repression or inappropriate fixation leading to the probable development of an increased incidence of neuroses and perversions in civilised man. Civilisation therefore could be expected to lead to degeneration. This was a message in tune with the temper of the times.

The legacy of that message is still with us. It is common among psychologists to decry the medical claim that there is a genetic (degenerate) basis to the neurosis. But until quite recently the taking of childhood histories, even by dynamically oriented therapists, has in effect been an enquiry about the unfolding of psycho-genetic instructions in the life of this particular child rather than an investigation of potential environmental determinants of a neurosis.

Project for a Scientific Psychology

Today Freud is liable to be characterised by his opponents as being impossibly vague, almost mystical and definitely not scientific. Much of the above details may seem to reinforce such claims. However, we should remember that Freud was very concerned with the biological developments of his day. Sulloway has argued that much of his work can only be properly understood if its hidden biological assumptions are recognised. For a biologically trained and biologically oriented scientist around 1900, it would have been impossible to ignore the facts of evolution and the biogenetic law which appeared to account for it. The alternative would be to have one's scientific course run perilously close to philosophy and metaphysics.

In contrast to their psychological contemporaries operating within philosophy departments, psychoanalysts at the start of this century could be distinguished by their willingness to grapple with the real phenomena of hunger, lust and fear and our animal inheritance. While anxious to maintain that there were distinctions between psychology and biology, that the two were independent sciences, Freud would never have been happy to develop a psychology that was lacking in biological relevance. In modern parlance, he saw himself as erecting a theory of behaviour that had a fundamental ecological validity.

Nor was Freud arbitrary in his arguments at any point or anything short of logical. While his initial observations on hysterics were the primary empirical data he sought to explain, his subsequent theoretical developments arose out of attempts to pursue rigorously the logic of his early formulations and to deal systematically with their apparent flaws. Arguably the problem was that he was too logical and too systematic and that the methodical unfolding of his analytic presuppositions took precedence over any attempts to expand his clinical base with reliable observations. He failed to distinguish between science and logic.

In doing this, however, he was being a scientist par excellence, as this was commonly then, and still is often now, understood. I have argued in The Suspended Revolution, that for Galileo, Newton and Descartes, science involved the working out of the logical implications of an initial set of conjectures. Where a conflict arose between the consequences of a conjecture and observable data, it was the data rather than the conjecture that was commonly sacrificed. This was exactly what analysts began to do (and still do) in therapy. Far from allowing his patients to refute his proposals, Freud used the material they offered him in one way or the other to support his argument. Free association became a process of waiting for the patient to "slip" in the way that the theory dictated - all the rest of the details offered being ignored. Indeed, as a number of his case histories demonstrate, Freud was frequently unwilling to wait for the appropriate slip but dictated to his patients what was happening to them, whether or not the evidence supported him and whether or not they agreed - as the case of Dora clearly shows.

There have until recently been 2 dominant philosophies of science. According to one, science proceeds by setting up hypotheses and deducing consequences. This Freud did thoroughly. The apparent disfavour his deductions caused were, for him, a good indication of the scientific validity of his procedure rather than the reverse. After all had not all the great scientists - Copernicus, Darwin - incurred disfavour?

According to the other, scientists make inductions strictly from the observable facts. But the biogenetic law was supremely scientific by this criterion. This law, unlike most scientific laws, arose solely as an induction from empirical data. Although many exceptions to it were detailed, even by the Haeckelians and Lamarckians who supported it, accessory arguments were developed to account for the exceptions. Furthermore, at no point did the biogenetic law succumb to empirical disproof. It was, rather, bypassed by the rediscovery of Mendel's work, which implied a radically different mechanism for heredity.

However, it was not until the 1920's that this became clear in biology. Even then biologists were slow to give up a biogenetic view entirely. In great part this must be because of the intuitive plausibility of the idea. As Lamarck said it is difficult to see evolution making any sense without such a mechanism - a remark echoed by Freud toward the end of his life. While writing Moses and Monotheism in 1937, which depended heavily on a recapitulatory mechanism, he was informed by Ernest Jones that such thinking had gone out of fashion in biology. Freud wrote in the final text that he realised that one difficulty in the way of accepting his proposal lay in its running counter to contemporary biological wisdom, which rejects the idea of acquired qualities being inherited. He decided, however, that he would stick to his guns as he could not picture biological development proceeding without taking this factor into account.

INCEST REVISITED

I have argued that instinct, inhibition and repression are biological terms, which acquired a larger cultural resonance once dropped in the sounding box of psychoanalysis. Freud's efforts

to incorporate these terms were often inspired. But working at the forefront of the biological sciences of his day, he was liable to be mistaken. The biogenetic law provides a grand scale example of this. However, the issues involved were not just matter of theory. The theory that was to significantly influence the interpretations put on accounts of trauma in childhood and war and in particular accounts of incest. It is in the handling of incest that some of the damaging practical consequences of psychoanalysis are revealed.

As we have seen according to psychoanalysis, incest is a primal fantasy and the incest taboo the origin of culture. Incest is supposedly the hallmark of our animal nature, something we have repressed. On this repression is built the human personality. But does incest indicate animality? And what are the psychological consequences of infringing the taboo? The latter was the question that faced Freud between 1893 and 1896. With the development of psychoanalysis, he offered a theory about the origins and importance of the incest taboo but, perhaps amazingly, seemingly had no view anymore as to what the consequences of infringement of this taboo might be.

Early anthropological writings on incest had been dominated by the notion of a previous stage of human history characterised by unbridled sexual behaviour. This may in part have made for a general acceptance of psychoanalysis. The idea of such a prehuman stage was first challenged by Westermack in 1894. Convinced that the basis of human behaviour must be consistent with the laws of evolution, he argued that if we do not resort to consanguineous sex, there must be some biological reason why not. In other words, the propensity to mate outside one's blood relations must be a proclivity rather than a defence. This propensity would then be elaborated in custom and laws. In support of his findings, he noted the relative absence of erotic feelings between siblings raised together.

Freud and others counter-attacked. If there was a proclivity to breed out, why erect laws to ensure that we avoid incest? Furthermore the apparent lack of erotic impulses for family members was a surface phenomenon. Analysis revealed that the depths were an entirely different matter.

In reply to this Westermack pointed out that laws do not forbid what men wish. Is there then a natural inclination to murder? He also stuck to his guns on the absence of erotic feelings between siblings and turned to animal data for support. His own observations and subsequent studies by others have demonstrated quite conclusively that animals also have a propensity to outbreed. Incest does not normally happen in the animal kingdom. In the wild, animals avoid incest, even when the consequences are loss of social status.

There have been a number of studies, which have attempted to test the Westermack hypothesis in humans. One was carried out on Israeli kibbutzim. The results indicated that where children are brought up together and no restrictions are put on childhood sexual experimentation and curiosity and even where the wish of the parents is that the children marry within the community, there are rarely if ever any such marriages. Children brought up together seem not to find each other sexually attractive. Similar studies in China and Lebanon have led to essentially the same conclusions. Furthermore, marriages contracted between individuals brought up in the same household, even where not related to each other, have a lower fertility rate and higher rates of dissolution.

Thus, close contact during childhood appears to lessen sexual attraction. Not only does this apply between siblings but it also appears to hold between mother and siblings, which is particularly inconvenient for the Oedipal hypothesis. It would seem that there is a biologically determined period up to puberty, where contact has a negative imprinting effect. The father, of course, is the one member of the family, who is most likely to be out of the home for considerable periods of time and a number of studies show that the fathers most likely to sexually abuse their daughters are those who are at home least often.

Returning to the level of anthropological theory, William Arens has pointed out that Freud completely misinterpreted the incest taboo. A taboo is not a proscription so much as a reservation. In older societies with clear incest taboos, the meaning of the taboo is not so much that individuals should refrain from incest, so much as that certain people, the rulers, are obliged to marry within their own family. They must be incestuous, and it is this that sets them apart from commoners. Furthermore, reviewing the fieldwork on incest, William Arens has pointed out that a proscription of incest is not a cultural universal. In societies, where children are brought up in close contact with siblings, there is less likelihood of there being any injunction against incest. He has also noted, in addition, that there have been a number of well documented instances, where incest has been practised steadily, by virtue of unusual social arrangements rather than as a result of one individual forcing their will on another. In such situations, the results have not been shame or undue psychological damage.

While this evidence negates the notion of barely containable impulses seething beneath the surface, far from making the subject of incest less of a problem, Arens has argued that it makes it perhaps even more disturbing. It makes incest rather than the incest taboo the hallmark of the human. Social arrangements it would seem may make incest more likely - by having fathers away from home too much for example; a problem that social injunctions such as rules for exogamy attempt to mitigate.

The possession of culture, therefore, does not imply some superiority to animals but rather indicates that the human species has embarked on a hazardous enterprise. One that may generate incestuous attraction. But one also in which the participants are uniquely capable of going against the grain of nature and forcing their will on another, even where no attraction exists.

It has recently become chillingly clear that the sexual abuse of children does lead to neurotic disturbances in later life. However, far from confirming the central importance of sexual libido in the psychic economy, the findings from sexual abuse suggest that issues of power and domination are more important. This follows as incest by virtue of aberrant social arrangements does not appear to have damaging psychological consequences but physical abuse of children or mental cruelty leads to a very similar picture to that of sexual assault.

This problem is one that psychoanalysis, by concentrating on the origins of the incest taboo has managed to avoid entirely. In so doing, it has contributed to making the actual problem of incest invisible. As late as 1948, in his survey on sexual behaviour, Kinsey was to claim that incest existed more in the mind of clinicians and social workers than in actual performance. We now know that this is not the case.

PROJECT for a "SCIENTIFIC" PSYCHOLOGY

Another way out of Freud's 1895 impasse in attempting to frame a scientific psychology, was to ignore consciousness. As noted in chapter 1, the development of the notion of the reflex and its application to human behaviour pointed toward a possible sidelining of consciousness. While the idea of simply basing human behaviour on reflexes seemed far too crude to apply to the set of communicative acts that was dynamic psychotherapy, such an approach could offer results if a strict focus on the outer manifestations of behaviour was adopted. This approach, which came to be known as behaviourism was first propounded in 1913 by John Watson.

Watson was an experimental psychologist working on animals. As such, internal imagery and introspection were of little interest to him. His central question was what was the relevance of animal to human behaviour? He answered this by turning the question upside down. What was the difference between humans and animals? Typically, the answer is along the lines of language and thought, to which Watson replied that language could be just a set of habits of the throat and thinking - a case of sub-vocal speech.

Watson argued that when it came to studying animals, we are perfectly objective and scientific and posit reflexes and habits, which we then investigate experimentally. But when the reactions of humans display a complexity not found in animals, we panic and introduce mystical concepts that probably can never be subjected to experimental proof or disproof. The fact that it seems that some knowledge remains latent (unused) is no proof that there is an unconscious, or a censor, an ego or an id.

His arguments won some support as, at the time, the experimental study of internal imagery ran into serious difficulties. Findings could not easily be reproduced. And in the absence of more detailed knowledge of brain function there seemed to be no easy way to test out competing views. Debates on the intensity of imagined colours and the issue of whether thought can be imageless or not and if so what proportion is imageless seemed insoluble and gave introspectionist psychology a faintly ludicrous halo. However, while introspective psychology might have developed uncomfortable similarities to medieval metaphysics, there was equally little doubt for most people that internal imagery was a real phenomenon. Watson's arguments were, therefore, by no means compelling. His advantage lay in that working with rats, he was clearly steering closer to physiology than philosophy. Psychoanalysis had aimed at this initially but by 1913 was less clearly on target.

The dictates of the philosophies of science at the time, which were that science should be inductive and experimental, favoured Watson. Working with animal behaviour, it was difficult to be anything other than inductive. One could only work from observable behaviour. The experimental subject was not open to persuasion or suggestion and prior beliefs and cultural biases did not come into the equation. Thus, in an area where there were so many possible variables, focussing on animals brought about a significant reduction in the possibility of having one's experimental results confounded by unanticipated events. This led to the observable data and nothing but the observable data becoming the focus of attention, never mind the fact that the data concerned issues that were trivial and of little obvious relevance to human concerns.

While the scientific legitimacy that behaviourism claimed was seemingly theoretically neutral, with Watson proclaiming that "science endeavours to understand the laws of nature and is indifferent to the uses that may be made of them", behaviourism also found favour with the rising liberalism of the times. Where Freud moved away from an environmental precipitation of

the neuroses towards an endogenous aetiology, Watson's emphasis was on the environmental determinants of behaviour. He had little time for theories of inherited degeneration or the domination of behaviour by instincts. This was brought out by a memorable quote, when he said that he would feel perfectly confident in the favourable outcome of careful upbringing of a healthy well-formed baby born of a long line of crooks, murderers, thieves and prostitutes.

In considering the behaviour of animals there seemed to be little point in making a distinction between conscious and unconscious but this did not stop Watson accounting for the genesis of the neuroses. He took an 11-month old infant, who seemed to show little or no fear except of loud sounds and in particular showed no fear of animals brought close to him. Watson then proceeded to make him afraid of white rats by sounding a loud noise behind the child, every time he reached out to stroke the rat. After a number of trials, the child began to cry when he saw the rat. This experiment was later to be widely cited when behaviour therapy for the neuroses was developed during the 1960s.

However, while Watson was a clear environmentalist, later behaviourism was as degenerate in its orientation as psychoanalysis. By the time behaviourism began to emerge into the mental health arena, it was with the theoretical underpinning of B F Skinner rather than that of Watson. And for Skinner's operant behaviourism, the issue with the neuroses was that the neurotic subject was getting something out of their predicament that was maintaining the state. Crudely put, they were enjoying their discomfort, in a manner that could only be seen as degenerate.

Skinner and Ryle

While the rise to prominence of behaviourism has been the subject of many excellent investigations in recent years, what followed was in many ways even more surprising but has been less well investigated. As noted Watson's arguments were not compelling. So much was this the case that by the 1930s strict behaviourism seemed to be in terminal decline. Animal experimenters such as Tolman in California had shown that the behaviour of animals could not simply be explained in terms of stimuli-response reflexes.

When put into cages and required to get out, they appeared to problem solve their way out. Tolman's group also put rats into mazes and taught them to find their way through the maze to a food reward. The maze was then flooded so that the rats had to swim if they wanted the reward. According to orthodox behaviourism, this should have put them back at square one, as learning to get to the reward had to be a matter of acquiring long chains of reflexes, among which joint position sense was thought to be one of the particularly important sets of stimuli. These latter cues, however, would all be altered if the rat had to swim. But it seemed that the rats did not have to relearn. They made their way fairly directly to the food. From which Tolman concluded that they must have some internal map or image of the maze.

Tolman's findings had many similarities with work being done on primates by the emerging school of Gestalt psychology in Germany. In experiments based on Wolfgang Koehler's studies of chimpanzees, Tolman's group trained monkeys to watch a banana being placed beneath a bucket. They were then taken away and distracted and later brought back to the bucket. At which point they invariably looked underneath for the banana. If the banana was replaced by a lettuce leaf unbeknownst to them, they were typically indignant and looked around the room for the missing banana, suggesting that they had a clear image of what it was they expected to find.

Despite these findings, Tolman's work and Gestalt psychology were eclipsed in the 1930s by the resurgence of a strict behaviourism. Neo-behaviourism, as espoused by Clark Hull in Yale, and later radical behaviourism as propounded by Skinner arose to counter any softening of attitudes toward the exorcised ghosts of mental imagery and any attempt to draw distinctions between conscious and unconscious mental processes.

One factor cited in this resurgence was an increase in research funding for psychologists in the 1930s, large amounts of which went to prestigious units such as that at Yale, whose directors just happened to be behaviourally oriented. Another factor was the rise of logical empiricism as a philosophy and the strong endorsement philosophers such as Bertrand Russell and Gilbert Ryle gave to the behaviourist approach. As Ryle put it, people may object to the exclusion of introspections and dreams, from attempts to account for human behaviour. It may seem like playing Hamlet without the prince. But on close inspection "the extruded prince .. came to seem so bloodless and spineless a being that even opponents of [behavioural] theories began to feel shy of imposing heavy theoretical burdens on his spectral shoulders". When one of the leading philosophers of the day argues with such a polemical flourish, it takes a strong man to resist. Ryle's own favourite author, Jane Austen, he noted managed to convey intense drama and emotional subtlety and depth without ever having to recourse to internal streams of consciousness or to dreams.

I would argue that it was primarily psychoanalysis that put paid to introspection and a psychology of consciousness. From 1910 onwards, psychoanalysis increasingly deserted the arena of consciousness. The one bulwark against behaviourism would have been to take the self-reports of subjects at face value. And on this point, psychoanalysis seemed incapable of reform from within. In contrast to behaviourism, its involvement in the interpretation of symbols appeared to put it in the realm of the humanities rather than that of science. The only option open to "scientific" psychologists in the face of this irrefutable theory of the mind that had grown up before them seemed to be to abandon completely the notion of a dynamic unconscious, in much the way that Eastern European countries rebelling against Stalinism have seemed to need to throw out communism and even socialism as well. But in this case, the fledgling psychology of consciousness went out with the murky bathwater of the unconscious.

Unfortunately, Ryle's dramatic language and the increasing success behaviourism had in the 1960's in the treatment of phobic and obsessive-compulsive disorders only served to obscure the fact that orthodox behaviourism was of little use in cases of hysteria. Indeed, behaviourism generated its own set of terms to malign hysterics. The idea arose that hysterical behaviour, even where it was utterly bizarre and seemingly uncomfortable to the subject affected, was maintained by secondary gain - subjects were supposedly getting something out of their behaviour that others had not noticed and put a stop to.

This kind of formulation is now parroted by every medical student when asked about hysteria and is found in a multitude of textbooks. Needless to say, it does not make for a particularly helpful approach to the problem. Behavioural techniques based on these notions do not work for hysteria. Neither does behavioural theory readily account for the occurrence of incest or predict what its consequences should be. And in particular orthodox behaviour therapy has nothing to offer those who are the victims of child abuse, where as we shall see one of the sequelae is recurrent intrusive imagery.

EVOLUTION AND PSYCHOLOGY

In 1866, a priest from a poor order published some results, in the Proceedings of the Natural History Society of Brno, of work he had been doing since 1856. The article has been described as a model scientific paper; not by virtue of the startling implications of the work reported, or the difficulties inherent in performing experiments that would solve current scientific difficulties, but rather because of its low-key and concise presentation of the relevant data and the sober formulation of its conclusions. Apart from this one publication, Mendel did little to publicise his findings. He most certainly did not have the inspired presentational and political skills of a Freud. His story is a caution against doing science the way philosophers of science think it should be done.

Some romance goes out of the story perhaps, when it is revealed that the same priest was a university-trained physicist and chemist. That one of his teachers, Franz Unger, had a theory of evolution that had close resemblances to the one Mendel's data later supported. The reason Mendel succeeded where others failed can, it seems, be put down in part to the population analysis he undertook, in contrast to an analysis of single individuals. Taking tens of thousands of plants and cross fertilising and analysing the results statistically, Mendel came up with probabilities that could be generalised. All things being equal, such and such a thing would happen. This statistical approach was in marked contrast to Freud, whose method lay in the intensive analysis of individual cases. Freud's method is appropriate for matters of historical fact, such as whether this individual was or was not abused 30 years ago by their father. It is not, however, capable of being applied to the question of whether ontogeny recapitulates phylogeny.

However, despite the success of his statistical method, in great part it was just this method that led to Mendel being ignored. A statistical approach gave rise to a kind of law that was quite the opposite to the biogenetic law, which was seen as iron and invariant of the type that Newton's laws were thought to be. In 1900, when the significance of Mendel's work was beginning to be appreciated, it was still iron and invariant laws, that science was after rather than relations between probabilities. These were thought of as an inferior sort of science. The irony of course was that only a few years later even Newton's laws would be seen to be relative and only to hold - other things being equal.

Another factor possibly conspiring against Mendel lay in the lack of a word for what investigators were trying to find. Different thinkers and experimenters toyed with the possibilities of what could be responsible for inheritance and came up with gemmules (Darwin), plastidules and plassons (Haeckel), colloids and cystalloids (Spenser). Very often a science does not get off the ground until a usable word with an appropriate amount of creative ambiguity gets drafted in to fill a central function. So, it was with neurosis and psychosis.

The term gene and its accompanying science of genetics was not coined until 1906 by Bateson. The terms genotype and phenotype were not coined until 1909 by Johanssen. The launch of these various terms coincided with a switch to a Mendelian approach. With the launch of "genetics" anything that did not conform to the Mendelian paradigm was soon shunted to the back-burner. So, it was with the biogenetic law. This inevitably followed as it became clear that the units of inheritance were small and discrete and probably chemical. A recipe was inherited rather than a blueprint - a recipe for mixing environmental inputs rather than a blueprint that incorporated ancestral learnings.

The implications of the new genetics can be brought home by an example. In recapitulatory terms, man is the inheritor of ancestral learnings. He is old even before he is born. However an emphasis on recapitulation led to an ignoring of evidence that far from being old at birth, one of the characteristics of the human is their failure to grow up, their remaining young and flexible. For example, human and chimpanzee babies show striking resemblances but adult humans and chimpanzees do not. The chimpanzee matures in a way the human does not. The adult human retains even in adulthood the shape of head that infant chimps and humans have. It is this shape that permits the brain expansion that distinguishes humans from other primate species. This phenomenon is called neoteny and is superficially in many ways the opposite of recapitulation - a clearcut case of humans not going through the stages traversed by other animals on their way to maturity.

From this a metaphor can be derived. In humans we have a harbinger of new possibilities rather than the final product of old solutions. Such a metaphor would be consistent perhaps with the thrust of recent humanist psychologies and psychotherapies, that in contrast to psycho-analysis have stressed the potential for human growth and have argued that civilisation is not predicated on neurosis but is rather a perfectible enterprise.

Nevertheless, it took till the mid-1930s for probabilistic genetics to be definitively accepted and for its influence to spread beyond biology. Its acceptance in the end was probably influenced by the fact by this stage, the quantum revolution was happening and a modern probabilistic physics was rising from the ashes of Victorian certainty. All of a sudden, it began to seem that even the interpretation of hard scientific laws was a hazardous enterprise.

Modern Evolutionary Psychology

It is important to stress at this point that Freud's mixing of evolutionary biology and psychology was not mistaken a-priori. His contemporaries William James and James Baldwin were evolutionary psychologists, whose work is still acceptable today. Baldwin's influence gave rise to the developmental psychology of Piaget and to current work on developmental neuropsychology.

Working from within a framework established by the work of James and Piaget, one of the most notable of current cognitive psychologists, Jerome Bruner, has taken issue with the Freudian picture of the child as being an ego-centric, fantasy dominated individual, responsive almost exclusively to inner needs. The evidence, he argues, points rather convincingly in the opposite direction. Children from a very early age, less than 12 months, can take up the perspective of others. They appear to be innately social. This innate sociality finds its full development in human culture through an intimate cooperative interaction with others rather than through competition.

In further contrast to Freud, who relegated religion to the category of a neurosis and who lost interest in the question of consciousness, William James went on to become the first serious explorer of the psychology of religious experience. In this endeavour, he drew heavily on orthodox Darwinian theory.

It is partly because of Freud's general cultural impact, that it now seems inconceivable to most readers that a psychology of religious experience could emerge out of Darwinism. The struggle for survival and the notion of inherited instincts conjures up a vision of egoism, that seems at odds with the world of religious vision and that seems to relegate the values of such visions to the realms of self-deceiving fantasy. However, in a cogent revisionary view of evolutionary

theory, Robert Richards has recently argued that the central question that Darwin and his contemporaries attempted to answer was how evolution could lead to altruism. If evolutionary theory could not be shown to lead to altruism, Darwin thought, it would fail. This followed as none of the proponents in the debates on the validity of evolution questioned the existence of altruism or of a moral faculty in man. If the theory could not explain these then, the implication was that at some point God intervened and accordingly at the end of the day, evolutionary theory would really explain nothing very important.

This was the approach William James took. But in addition to developing a comprehensive psychology of religious experience, James along with Janet was also a psychologist of consciousness. Neither saw evolutionary theory as being a problem for such a psychology. Indeed, the most recent trend in thinking on this subject has been to cite evolutionary theory in favour of consciousness, on the simple basis that we obviously have a consciousness and if so, it must be important and of evolutionary advantage.

This position committed both Janet and James to locating psychopathology within the field of consciousness rather than in the interaction between consciousness and any dynamic unconscious. On this basis, what is needed in psychotherapy are detailed explorations of consciousness, in the sense of attempting to get hold of all the images and words that are within consciousness, rather than attempts to make symbolic links with supposed biological processes.

The collapse of the biogenetic law fatally compromised psychoanalysis. It also compromised the basic mechanism that Freud postulated was responsible for the generation of the neuroses - a process of quasi-biological repression that operated outside of consciousness. But it was to take a further 40 years before the Freudian notion of repression was to lose its grip on the psychodynamic imagination. What can take its place? So accustomed are we culturally to the idea of defending against our inner instincts that most readers will probably not readily be able to see an alternative. There are two that we will explore in the following chapters.

One is dissociation. As this concept has lain for so long outside the psychological mainstream we will have to work our way through a variety of seemingly esoteric disorders that have been termed the dissociative disorders to get some feel of the issues involved.

The other process is repression. But by this I mean something quite different to the kind of process proposed by Freud, which operated out of consciousness and over which we have little or no control. Rather I mean something much closer to what Freud meant in 1895, when repression meant the suppression of traumatic memories. This is much closer to what the reader will probably intuitively understand by the term repression; that is the pushing out of consciousness of disturbing material at least semi-purposefully. If this latter form of repression is operative in the neurotic disorders, the implication is that we, the afflicted, know our own minds far more than we are usually given credit for, or indeed give ourselves credit for.

5 CONSCIOUSNESS AND ITS VICISSITUDES

In as much as we only have a single and simple thought of a given thing at a given time, there must necessarily be some place where the two images coming from the two eyes, or the two other impressions coming from a single object through the double organs of the other senses, can coalesce into one before they reach the soul so that they do not represent two objects to it instead of one. There is no place else in the body, where they can thus be united unless it is done in [the pineal] gland.

Descartes' Passions of the Soul: Article 32

Despite the obscurity of the Freudian notion of repression, it was Freud's mechanism rather than Janet's dissociation that won out as being the mechanism thought to be responsible for the psychoneuroses. Trying to decide just why this should have been the case is no easy matter. I will try to pinpoint as closely as possible the point in time at which repression clearly gained the upper hand. The case of Sally Beauchamp will help us date this event to somewhere around 1915. In recent years, dissociation has re-emerged to the point where it has replaced repression. This re-emergence is clearly visible from around 1975.

So dominant has the Freudian concept of repression been and so complete the neglect of consciousness, as a consequence, that the notion of dissociation requires illustration. To get a better understanding of the issues, I will look at a number of states that have been labelled as dissociative. The curious thing about some of these states is that they will, I believe, seem to the reader at the same time both esoteric and commonplace. This is because such states are actually very common but our awareness of them has been marginalised owing to their inconsistency with what have until recently been the dominant conceptions governing psychological thinking.

The term dissociation was coined by Janet and literally meant dis-associated. It is usually taken to refer to the splitting apart of psychological functions that normally go together. Pain perception may become dissociated, for example, in the heat of battle or sport, when serious injuries go unnoticed for lengthy periods of time. In chapter 2, we listed the stigmata of hysteria, according to Janet, all of which he saw as involving dissociation. The prominent ones were fugue states, absences, somnambulism and amnesia. But there are a number of other states, first described around the end of the last century, and others more recently described that have been termed dissociative

Depersonalisation & Derealisation

One of the most dramatic and yet common forms of dissociation occurs when self-perception dissociates. This leads to the experience of depersonalisation - is this body behaving seemingly automatically, really me? Such an experience was first formally noted by a French clinician, Krishaber, in 1873. The patient was a 28-year-old Civil Engineer, who sought help out of distress at feeling he was double. He experienced one self that thought and one self that acted and he did not know which was him. He expressed this as a feeling that he had entered a dream of some sort.

Most readers will have experienced something similar at interviews or on other stressful occasions - a feeling that they are somehow looking on <u>at</u> themselves making a fool of themselves. It can also happen spontaneously, particularly when subjects are relaxed or

relaxing. It may lead to the feeling that you should pinch yourself to make sure you are really here.

A converse phenomemon - derealisation - was described after the first world war by Willy Mayer-Gross. In this state the subject has the experience that real life has no more substance that a television programme. It has somehow become two-dimensional. Again most readers will have had this experience, at interviews when all may seem unreal. The interviewers may look strangely distant. Other derealisation experiences are feelings that every thing is being staged, or that there seems to be a haze or a fog between you and the world.

A central feature of such depersonalisations and derealisations is an awareness on the part of the experiencing subject that something abnormal has happened. Judgement is typically not impaired. However, if marked, the experience may provoke considerable anxiety and lay the basis for a full-blown anxiety state or may lead to the development of a phobia about going out or going into specific situations. This can be a vicious circle as anxiety itself is a potent trigger to dissociation. Attempts to express this and some of the more esoteric dissociative experiences, outlined below, have led to subjects being labelled as schizophrenic until quite recently. Typically, these experiences start and end abruptly. They may also occur before a fit, in individuals who have temporal lobe epilepsy, or they can be produced by electrical stimulation of the temporal lobes.

Hypnoid Dissociation

While sleeping, we all dissociate. Far from being unconscious to happenings around us, we still process information, but we do not elaborate this processing into conscious percepts. This dissociation may be quite selective, as indicated by mothers who may awaken at the slightest sound from their children but not in the face of the din of traffic passing the bedroom window or the alarm clock. A dissociation of sorts appears to happen actually within sleep as well, when we may have the experience of watching ourselves dream - so-called lucid dreams.

The relation of dissociation, hypnosis and hysteria has traditionally been close, as indicated by the term hypnosis, which was derived from the Greek for sleep. The earliest hypnotists aimed for a state of somnambulism to mark the achievement of deep hypnosis. And, Breuer used the term hypnoid dissociation to characterised a fundamental mechanism in cases of hysteria.

Furthermore, there are a host of unusual experiences, that can occur in trances, meditation, deep relaxation and on the edge of sleep. Many people have the experience on falling asleep of hallucinating so vividly that they mistake what is happening for reality. For most of us the same phenomenon appears to give rise to what may be one's most vivid dreams but which do not amount to hallucinations. This dreamy state which differs from the rest of sleep and whose dreams seem also to differ from those encountered otherwise in sleep, has been noted from antiquity by observers such as Aristotle and Hobbes. The philosopher Swedenborg and others have been able to describe how such states can be induced and how in them imagination can slip the noose of mundanity.

These hypnoid experiences may also include sensations of leaving one's body, as outlined below. They may also occur in anxiety states as well as when we are deeply relaxed and on the edge of sleep. Thomas Kenneally in A Family Madness has given a compelling fictional account of the possibilities for disaster inherent in the combination of anxiety and some of the more esoteric of the dissociative experiences.

Out of Body and Near Death

When falling asleep many people have the sensation of falling or moving. In relaxation, this can be exaggerated so that one may feel oneself seemingly rise upwards to float somewhere just above the body. This out-of-body experience (OBE) may or may not be accompanied by an ability to apparently turn around and look at the body left below. Sometimes, the floating self appears to have an experience of moving off, which is typically described in terms of flying. Far from being mysterious, such phenomena appear to be much the same kind of events as those that are happening in the visual or auditory systems, at the onset of sleep, but occurring in this instance in the proprioceptive and kinaesthetic sensory systems. Their mysteriousness lies more in most people's lack of conscious awareness of possessing any such senses or sensations.

Closely related to OBEs and sharing many of their characteristics are near death experiences (NDEs). Recent years have seen in creasing interest in the complex of phenomena that may occur to some subjects close to death. This interest was focussed by a book Life after Life by Raymond Moody. Frequently it appears the subject will hear themselves pronounced dead. They then find themselves moving along a tunnel after which they emerge in the light. They may stay for a while to watch resuscitation procedures. Or else they may move directly towards a source of light, perhaps accompanied by shadowy others. They come to a boundary at which they realise that they are not going to die and that they have to return to the body left behind.

Some experiences, especially near death by drowning, may include having a panoramic vision of one's past life in which one appears to move backwards through time, seeing what appears to be everything in often quite minute detail. One of the best accounts of this was provided in by Ambrose Bierce, in a short story entitled Incident at Oxbow Creek.

Such changes it seems cannot be put down simply to anoxia of the brain, as similar experiences have been recorded in subjects exposed to danger but not actually dying or undergoing catastrophic physical changes. They have been reported from all cultures and from all recorded periods of history. An interesting feature about them it that there appears to be a basic core experience that is common but quite marked adaptation of the experience to the cultural situation of the individual. Thus, if they meet anyone other than their relatives, for Hindus it will be Lord Krishna and for Christians Jesus.

Such experiences point to a further reason why the concept of dissociation has not been popular and a psychology of consciousness has been treated with caution. A perennial problem of such psychologies is their apparent propensity to derail into the preternatural or parapsychological. This problem will be found to recur through this and subsequent chapters.

Aside from these esoteric experiences, there are a host of others that we all have at some point, which are seen as dissociative. These include the experiences of deja vu and its opposite jamais vu - feelings that one has been somewhere before, or met someone before, when all the evidence points to the impossibility of this or a feeling that a place, or person, one should know is quite alien. Other experiences are not recognising oneself, in mirrors, or being told by friends that you met them and didn't know them or meeting friends and not remembering it afterwards. Being unable to remember significant chunks of one's life also counts as a dissociative experience, as does having waves of emotion wash over one, for no apparent reason.

MULTIPLE PERSONALITY c.1890

However, by far the most dramatic dissociative state, and the one that best illustrates the rise and fall of the concept of dissociation and the associated interplay of psychology and biology, is that of multiple personality disorder.

In 1831, a Dr MacNish published a book entitled the "Philosophy of Sleep" in which he recounted the story of a lady from sometime earlier in the century who has since become known as the Lady of MacNish. According to the account, she was a healthy and well-bred lady, who one day without warning fell into a profound sleep which lasted some hours longer than usual. On awakening her mind was a blank. She knew nothing of who she was, or where she was. She had to relearn everything including reading and writing. Sometime later she fell into another deep sleep from which she awoke back to her old self and amnesic for all that had happened in the interim. For four years she oscillated between one state and the other. This same case was later described, apparently in the belief that it was someone else, by Dr Weir Mitchell in 1888.

In 1860 a Dr Azam, a physician from Bordeaux, reported the case of Felida to the French Academy of Medicine. Azam first encountered Felida in 1858, when she was 15. At this time she had apparently been ill constantly, since the onset of puberty. The symptoms were attacks of motor agitation, disturbed eating, aches and pains and she had become morose and withdrawn. She also began to develop swooning spells from which she would awake gay, active, and healthy. Unlike the Lady of MacNish, Mary Reynolds, she did not have to relearn anything in these states and she could clearly remember her melancholy state. Her gay state usually only lasted 2 or 3 hours. On returning to her melancholy state, she could remember nothing of her happier interlude.

Over a few months her gay spells grew more frequent. During one of them, she became pregnant. She first consulted Azam in a melancholy state because of her concern about her swelling abdomen, apparently not realising she was pregnant. She returned gaily a few days later laughing at the discomfiture to which she had put him. This oscillation occurred until she was a middle-aged lady, when the happier self took over, almost completely.

From the 1882 to 1889, a number of eminent French physicians published studies of the case of Louis Vivet. He had 6 different existences, some of which appeared to be younger versions of the same person. Some of his personalities knew of others but were unknown by them. Some were in contact with each other, others knew nothing of each other. His various states had quite different personalities, one being gentle and industrious for example, another lazy and irascible. In one state he had a left-sided paralysis, in another a right-sided one and in a third he was paralysed from the waist down. Curing the paralysis by hypnosis also brought about a change of personality to one of the others that were not paralysed.

These different cases, Janet argued, typify three different forms of multiple personality disorder. In the Lady of MacNish, there is a total disconnection between the 2 states. In the case of Felida there is partial awareness between the states. In Louis Vivet, there was a great number of personalities that changed place quite regularly every few hours.

In 1887, Janet introduced a further aspect to the subject. He had recently taken into his care a 20-year-old girl called Marceline. She had not eaten for months. She vomited if force fed. She

had retention of urine and generally appeared to be in the last stage of emaciation. She lay in bed seemingly insensible to the outside world. Nevertheless, Janet succeeded in hypnotising her. Under hypnosis she became alert, ate, urinated, and defecated normally and appeared perfectly normal. On being taken out of hypnosis, however, she reverted to her former state. Eventually he decided to leave her permanently hypnotised. Her parents on visiting and finding her normal took her home, where things were alright, until she had a period. This plunged her back into the original state. Returning to hospital she was restored by hypnosis. Over the course of the following years she got by in this way - living normally under the influence of hypnosis for some weeks, until some event precipitated a return of the former state, which was then relieved again by hypnosis. Based on this case, it seemed that personalities could be created through hypnosis.

Allied to the issue of personality creation through hypnosis was the phenomenon of seances. These began in the 1860s. At them mediums contacted departed spirits. To observers, like Janet and James what appeared to be happening was a case of autohypnosis, as the medium often appeared to take on characteristics of someone else at the point of contact. The voice might change, the things said might become coarse and disturbing and the facial features distort. These observations were typically supported by reports from the mediums, who report ed being penetrated by another being, so that they had the impression that they became someone else.

Writing in 1907, Janet estimated that there were 20 - 30 well known cases of multiple personality disorder - most of which had been reported from the United States. However, the issue was larger than this handful of cases might suggest. Through the 19th century, there was growing interest in the phenomenon of double consciousness. This was well illustrated by the fictional creation of Robert Louis Stevenson, Jekyll and Hyde. The interest aroused by such fictions was supplemented by some the cases listed above being reproduced widely in the major textbooks so that they became public knowledge.

The Biology of Dissociation

As outlined in chapter 1, what was to be psychology was in the middle of the 19th century split between an essentially spiritualist view of man and the emerging physiological and mechanical view. There was a great deal of scientific interest in the project of reducing spiritual phenomena to mechanical operations. Despite the esoteric quality of the dissociative experiences, they were seen as appropriate for scientific investigation, because the facts of biology seemed, initially at least, to hold out hope for a mechanical explanation.

As a consequence of the popularity of the idea of double personality, the idea developed that mental problems might be the result of two minds struggling against each other. This it was thought might explain apparent abrupt changes of mood, or episodic outbursts of rage and aggression. It also seemed that such a disorder might explain why mental patients could be found talking to hallucinated others. The phenomena of multiple personalities, deja vu and jamais vu, as well as the experience of depersonalisation, in which the subject can have the experience of looking at themself from outside as it were, appeared to confirm these notions.

The main stimulus to the development of such ideas, however, came from contemporary investigations of brain functioning. The location of the mind within the brain had been a problem since Descartes. On close examination, the brain appeared to have two lobes and four ventricles. How could an indivisible soul reside in any one of these? Intuition suggested it

must be in a single and unique organ. The only such within the skull is the pineal. This was one of the principal reasons for Descartes' belief that "even though the soul is joined to the whole body, there is nevertheless one part in which the soul exercises its functions in a more particular way". Ironically although within the skull, the pineal gland is not even part of the brain.

The other option was that, as the brain parts were all double, there might be more than one mind within the skull and that these minds might compete. The doubling of the cerebral hemispheres could in this way be seen as laying the basis for a phylogenetic origin for madness and neurosis - evolution predisposed to madness. One of the first speculations in the area came from Herbert Spenser. He suggested that just as two eyes produced binocular vision, allowing us to perceive in three rather than just two dimensions, so also human knowing was probably analogously bi-cerebral. This view however received a setback with the demonstration that each eye sent information to both cerebral hemispheres.

In 1845, Arthur Wigan published a book **Duality of the Mind**, in which he proposed an alternative view, that rather than the two hemispheres of the brain combining to produce the final product, they were independent and capable of sustaining separate personalities. Double consciousness therefore could be explained in terms of switching from functioning on one side to functioning based on the opposite side. Madness and confusions could be accounted for in terms of an imbalance between the two hemispheres or a mismatching of their outputs. The neurological data at the time were ambiguous, in that while it had begun to seem that the left half of the brain controlled the right half of the body and vice versa, a number of studies revealed that there was some input from the left side of the body to the left brain and similarly on the right. This led some neurologists to claim that we all have, potentially at least, two full brains. Furthermore, in a number of cases, it seemed we could lose a hemisphere and still function.

In 1863, Paul Broca and Gustav Dax independently reported to the French Academy of Medicine findings that were to be central to this debate and to many subsequently. These were that strokes, which involved loss of speech, at post-mortem were found to have unilateral destruction of brain tissue - the left side. Broca reported on 8 cases saying that "I dare draw no conclusions". But he challenged his colleagues to find cases of right-sided lesions.

The reason for being so hesitant was almost spiritual. With the abandonment of the pineal as the seat of the soul and growing acceptance of a brain localisation for the mind, investigators it seemed yearned for a spiritual order of sorts. This was crystallised in Bichat's laws of symmetry in 1805. The brain, as the highest organ, must be symmetrical - and on superficial inspection it appears to be. Broca's findings challenged this paradigm. The immediate response was shock. Briquet argued that it was patently absurd that there should be asymmetry. Were Broca and colleagues proposing that the right eye might see blue, black and red for example, while the left one saw green, yellow and blue? Defenders noted that there were many examples of asymmetry if one but looked. That for example our right and left hands differ markedly in function if not in form. Equally one of the two eyes was invariably dominant over the other.

The initial solution to the problem was something of a compromise. Broca argued in 1865, that both hemispheres were symmetrical, that there were no innate functional differences, but that in early brain development, the left hemisphere grew slightly quicker than the right. When it

came to mastering complex tasks, such as language acquisition, we tended to fall back on our more developed hemisphere.

This started another hare running. The implication that education and civilisation might avail itself of asymmetries quickly led to a concern to discover as much asymmetry as possible, in contrast to previous attempts to ignore the evidence in favour of it. Such asymmetries, it was thought, might explain the differences between men and women, between civilised and savage races and between sane and insane. Studies soon appeared finding that women had less developed asymmetry than men and that savages were less asymmetrical than Europeans. As it was believed at the time that the effects of education and civilisation to foster asymmetry could lead to the inheriting of an even greater tendency toward asymmetry, the whole formed a heady cocktail.

Further developments followed. In 1874, Karl Wernicke localised what has become known as Wernicke's speech area. Where Broca had appeared to correlate an inability to produce speech with a left sided anterior lesion, Wernicke found that a left sided posterior lesion could impair the ability to interpret speech. Localisation flowered after this. However far from being symmetrical it seemed as in the case of language that the highest functions all lay on the left.

This led to a personalising of the two hemispheres. The left came to be seen as intellectual, male, objective, oriented to wards the world, whereas the right was emotional, vegetative, female and subjective. The difference between the two hemispheres seemed to be supported by findings from hysteria, which was typically associated with left-sided paralyses and anaesthesia, supporting the idea that it might result from a pathology of the right side of the brain. Not only this but Janet found that in cases of hysterical loss of speech, paralyses and anaesthesia if they occurred did so on the right side of the body. All of which seemed to fit the emerging anatomical data rather well.

When it came to the phenomenon of double personality, the temptation to ascribe a personality to each of the hemispheres was naturally all but irresistible. A good deal of evidence began to accumulate rapidly giving apparent support to the idea. Charcot and colleagues, experimenting with the use of metals in hysteria, had found that when the application of metals to one side of the body restored sensation or motor function on that side, it was invariably lost on the other side. This suggested that some functional lesion was being transferred from one side of the body to the other.

In the same way it was found that pain could be transferred from one side of the body to the other and presumably ultimately from one side of the brain to the other. One of the patients to whom this was done reported her experience in terms of doors banging between two sides of her brain. Not only anaesthesia and paralysis but behaviour also could be transferred. Under hypnosis, it seemed possible to hypnotise one half of the body only with the implication that only one half of the brain was also hypnotised. This seemed to leave patients feeling cut in two. It also seemed possible to induce quite different experiences in each hemisphere. For example, Dumontpallier induced a hypnotised subject to hallucinate an attack by dogs on her right and a country fete on her left. To observers it appeared that the right side of her face showed horror and the left contentment. Thus along with the example of Janet's Marceline, it appeared possible to divide the personality by hypnosis and that this divide seemed facilitated by the presence of two cerebral hemispheres.

This pointed to the possibility that each of the personalities in dual personality inhabited their own side of the brain. However there were a number of problems that were not easily reconciled with such a view. One, which became apparent during the late 1880's as no cases of right localised speech were recorded, was the fact that the personalities of either hemisphere appeared to be able to speak - although some of intervening personalities appeared to have to be retaught. More problematic were cases such as Louis Vivet in which there were more than two personalities. These inconsistencies between the apparent biological possibilities and the psychological phenomena set the scene for increasing disfavour with the idea of dissociation. This was sealed by the emergence of an alternative biological model of the mind that appeared to be more consistent with the idea of repres sion.

Repression and Inhibition

Working with the vagus nerve of the frog, Weber found that stimulating this nerve led to a slowing of the frog's heartbeat. This finding remained neglected for some time probably by virtue of its counter-intuitive nature - stimulation by nerves was expected to lead to some increase in vitality not a decrease. But it was later developed in two ways. One by Sherrington and others, who went on to develop the modern version of the spinal reflex. This depended critically on the notion of reciprocal inhibition. By this is meant that when nerves organise an activity, they must simultaneously turn on and turn off various component elements of the activity. For example, moving my arm to lift a cup of tea does not just involve a nervous command to my biceps to contract but also one to my triceps to relax. Without a relaxation of the triceps, biceps activity would lead to one or other muscle being torn from the bone. This simultaneous relaxation and contraction requires organisation. Sherrington's achievement was to show that this degree of organisation all took place in the spinal cord, without the need to import some "soul" into the process.

A quite different demonstration of the phenomenon of inhibition by Ivan Sechenov was of greater importance for psychological thinking. The demonstrations of inhibition since Weber were all of muscle or gut activity being inhibited by nervous impulses. But not of nerves being inhibited by nerves. Starting from an interest in the phenomenon that we can block a sneeze or resist the temptation to scratch, Sechenov noted that the spinal reflexes of frogs who had been decapitated were often brisker than those of intact frogs. This led him in 1862 to investigate the possibility that the brain might generally inhibit spinal activity. He went on to demonstrate that this was the case.

This provided a major extension to Descartes' reflex theory. Since Descartes it had been assumed that there was some relationship between the intensity of the stimulus and the intensity of the reaction. But Sechenov's work opened up the possibility of stimuli that could elicit variable responses. The possibility of such flexibility led Sechenov to postulate that the development of a hierarchy of inhibitory influences underlay the evolution of man and the development of civilisation. This notion now seems distinctly Freudian.

This line of thinking was taken to its ultimate conclusion in the 1880's by Hughlings Jackson. Where Sechenov had demonstrated an inhibitory influence of the brain stem on spinal reflexes, subsequent work extended this up through the midbrain. Working from clinical cases, Jackson extended the notion up to the cortex in man and especially to the frontal cortex. The clinical sequelae of strokes illustrate his position quite well. As a result of strokes affecting the cortex of the brain, the ability to move an arm or a leg may be lost. But there is also an increase in the tone of and strength of the reflexes in the affected limb. This hypertonicity and hyperreflexia,

Jackson argued is normally inhibited by the cortex and it is that inhibition that enables us to use our limbs in the flexible way we do.

A natural experiment, in 1875, appeared to support Jackson's view. This involved a railway worker, Phineas Gage, who in the course of an explosion had an iron bar propelled through the frontal lobes of his brain. Remarkably he was up and about only an hour later. He suffered little by way of intellectual or memory deficits. But his behaviour was transformed. He became "disinhibited". More specifically he was coarser than before, more distractible, impatient and unable to cooperate with others.

Jackson's belief that the frontal lobes were the ultimate inhibitor was a widely shared one. Even Broca agreed with it. He was more struck by the frontal location of his so-called speech area than by the fact it was lateralised to the left side of the brain. Loosening of frontal lobe inhibition under the influence of alcohol or cannabis, for example, could therefore be expected to yield a regression to behaviour more appropriate to an earlier evolutionary state.

Jackson's views, with their notion of higher conscious areas inhibiting lower unconscious ones, were tailor-made for adoption by Freud. They included the idea that it was the process of evolution that built repression into the system. Jackson even postulated that in sleeping, dreaming and insanity, conscious inhibition was loosened, and primitive thinking and emotions could come bubbling up to the surface. Hence, he argued, knowing all about dreams should reveal all about insanity.

Sally Beauchamp

The triumph of the hierarchical model of the brain loaded the biological scales in favour of a repressive rather than a dissociative model of the neuroses. The significance of this biological loading and the time of its triumph become clear in what was to be the most celebrated case of multiple personality disorder.

In 1905, the Boston physician, Morton Prince published the story of Miss Beauchamp, in a book entitled **The Dissociation of a Personality**. This individual had it would seem four personalities and perhaps twelve or thirteen other states that might have evolved into personalities. Of the main personalities, one was impossibly proper and refined, another was flirtatious and extrovert and a third angry and broody. She became the most celebrated case of MPD, perhaps partly because of the racy quality of Prince's account, not far removed from the suspense of Jekyll and Hyde. Prince's mastery of when to throw in the next telling detail or the next unexpected twist in the plot adds to the undeniable suspense of waiting for the inevitable "murder" of the most appealing personality - Sally.

Most of the features of the case map accurately onto the model of hysteria outlined by Janet. This was no accident since Prince was in close contact with Janet, whose 1906 lectures on the Major Symptoms of Hysteria were delivered in Boston. Furthermore along with William James and other Boston psychologists, Prince was actively interested in the nature of consciousness and dissociation. A number of other cases of notable fugue states or MPD were also reported by the Bostonians. A possible criticism of his study was that Miss Beauchamp mapped all too well onto the notions of the disorder that had been worked out before she presented.

Despite great interest in this case, by the time Prince gave details of a further twelve cases, a few years later, the issue was almost dead. Psychoanalysis had taken over as the dominant

dynamic psychology - particularly in America. From an analytic point of the view, the inevitable erotic interplay between Prince and Miss Beauchamp had been naively ignored. Miss Beauchamp, an attractive 26-year-old had been coming to see Prince for over four years, sometimes several times a week and sometimes for entire afternoons and he appeared more than willing to be called out to her apartment and elsewhere on emergencies, even late at night. Recasting the story, it was argued that Miss Beauchamp had settled her Oedipal difficulties of the need to both please and defy her father all too well in establishing separate personalities to take on each of these functions.

Although splitting of personalities was noted during the war in individuals who were shellshocked, there were after that few clear cut cases reported until 1957, when Thigpen and Cleckley published details of a case under the title **The Three Faces of Eve**. They found themselves flooded thereafter with referrals. But of thousands of other individuals seen, there was only one other case that they were happy to accept as multiple personality disorder. The reason for this dearth of cases is usually at tributed to Prince having come off worst in the argument with Freud over what was going on in multiple personality. Like Breuer, Prince had opted for a simple hypnoid splitting. However, Miss Beauchamp's four personalities did not give Prince any anatomical protection to fall back on and his book came to be regarded as a curiosity - until the 1980s.

MULTIPLE PERSONALITY c.1980

As late as 1975, writing in the most authoritative psychiatric textbook, the Comprehensive Textbook of Psychiatry, John Nemiah noted that the prevalent view was that multiple personality disorders had become extinct, at least in Western civilisation. He demurred but did agree that the condition seemed relatively rare compared with the situation at the turn of the century. The prevalent view was articulated as late as 1978 by the prominent psychoanalyst Charles Rycroft, who argued such conditions could only occur where the mind was idealised at the expense of the body and that this could not now happen, in great part because of the irreversible influence of Freud.

However, as he wrote the ground was shifting. Periodically, psychiatrists worldwide review the diagnostic systems they use. The categories of disorder that emerge from these reviews represent consensus views of the profession, as to what pathological conditions are being seen. Once established, practitioners are strongly encouraged to use the consensus categories to facilitate research and communication.

There are two systems, a worldwide one, the International Classification of Diseases (ICD) and an American one laid out in a Diagnostic and Statistics Manual for Mental Disorders, of which there had been two editions prior to 1980. DSM 111 was drawn up during the latter half of the 1970's. One of the central aims of its authors was to ensure that it did not embody any Freudian preconceptions, as both DSM 1 & 11 had done. It was hoped that a framework could be adopted that would be neutral as regards competing ideologies.

DSM 111 established several new diagnostic categories on the basis that although they were at odds with prevailing theories common experience suggested they occurred, if infrequently. In 1974, Schreiber had described the 16 personalities in Sybil, and Davis and Osherson reported on Julie-Jenny-Jerrie. Eugene Bliss in 1980, reported on a series of 14 cases. This handful of reports provided the grounds for a diagnostic category of Multiple Personality

Disorder. The exclusion of MPD from previous classifications had been on a psychoanalytically oriented basis.

The following criteria were laid down for MPD.

1. The existence within an individual of two or more distinct personalities, each of which is dominant at any particular time.
2. The personality that is dominant at any particular time determines the individuals behaviour.
3. Each individual personality is complex and integrated with its own unique behaviour patterns and social relationships.

The authors of DSM 111 appear to have had no awareness of just what was going to happen in response to the creation of the new category. Almost immediately afterwards, several series of cases of MPD were reported, with one group claiming to have 100 subjects. Whereas pre-1980 textbooks were talking about a rare and exotic syndrome, which classically displayed double personalities, a rush of studies suggested a disorder in which there is typically four personalities but in which there may be up to twenty.

Up to 1980, somewhere around 200 cases of MPD had been reported worldwide. By 1984, 1000 were known to be in treatment. As of 1988, 4000 were in treatment and there were estimates that there were up to 20,000 cases in the U.S. alone. In part some of these are likely to be simply cases being re-diagnosed using the criteria laid down by DSM 111. However, it is striking how many came from the U.S.

Subjects currently being diagnosed as having MPD turn out to have been to the psychiatric services beforehand but have usually received some other diagnosis, either personality disorder or schizophrenia. Herein lies the rub. This explosion of interest has given rise to heated controversy, in part presumably because it involves some physicians re-diagnosing patients previously seen by others. Many of the psychiatrists claiming to have patients with multiple personality disorder have themselves been diagnosed by skeptical colleagues as suffering from a folie a deux. The skeptics in turn get diagnosed as having single personality disorder. So vehement has been the reaction that there is even research now being done on the issue of why reactions should be so vehement.

As well as the clinical difficulties, the multiple personality phenomenon ran into a murder trial, that left many feeling that for legal reasons it would be just as well if there was no such thing as multiple personality disorder. The trial was that of Kenneth Bianchi, known as the Hillside Strangler. In Los Angeles in the winter of 1977, ten young women were murdered, and their bodies were left displayed on Los Angeles hillsides. Two other women were murdered in Washington a year later and similarly displayed. Kenneth Bianchi was arrested. He protested innocence. An examining psychiatrist hypnotised him and was confronted by Steve, who acknowledged the murders and described them in sadistic detail. Kenneth denied knowing Steve. Was he guilty?

Based on expert opinion, the court thought he was. One of the crucial pieces of evidence was that it was suggested to Bianchi that he must be faking as real multiple personality disorders came in threes rather than twos. Shortly afterwards, Billy appeared. However, as research on multiple personality disorder has progressed, it has seemed to a number of observers that many of the personalities of the condition do appear during the course of therapeutic

engagement and seemingly in response to suggestion. Therefore, one might question whether the timely appearance of Billy really was evidence against a diagnosis of MPD.

Quite apart from such controversial cases, research on the disorder began to throw up an interesting profile of the typical individual who has multiple personality disorder. The vast majority are female. They typically have been sexually assaulted in childhood, although simple physical abuse is also common, and the onset of the disorder dates from the assault. From childhood onwards they show evidence of amnesic periods. Depression is common. So also is the hearing of voices, particularly voices coming from within the head. Fifty percent have what are termed somatisation features - Briquet's syndrome or more classic hysterical conversion reactions. However, far from patients switching personality at the drop of a hat, switching only seems to happen during periods of conflict and is often associated with headaches.

This clinical picture has strong resemblances to Breuer's por trait of Anna O and is almost identical to that of Sally Beauchamp. In just the same way as cases being diagnosed today, several of Miss Beauchamp's personalities put in their first appearance while under hypnosis. Just as in current cases, her switching between personalities was liable to happen at times of conflict or great emotion. Just as now, certain stimuli evocative of past experiences would trigger a switch between her personalities. However, on the issue of possible precipitation, Prince was ambivalent. Miss Beauchamp claimed to have been in some way "double" as a child and to have spent considerable time day-dreaming and fantasising. She came from a home where her father was apparently quite violent and where she adored but was unloved by her mother. This is quite typical of today's cases. But whether there was sexual abuse or childhood trauma, as invariably appears to be the case today, is unclear. The disorder took deeper root at the time of her mother's death at the age of 13. The night her mother died, a baby sibling also died - in Miss Beauchamp's arms. Prince appears not to have considered the possibility of manslaughter here. It was further aggravated by an ambiguous sexual encounter at the age of twenty - was she raped? There are no clear answers from Prince.

This consistency in accounts across almost a century is impressive. When subjects, who will ultimately be labelled MPD, are first seen now, they typically are not aware that they have a number of different personalities. Even after coming to therapy, if they are being treated by someone who does not believe in MPD or who does not recognise the possibility in this particular case, then personalities do not emerge. Different personalities often only emerge, when they are first suspected by a therapist. Therapist suspicion is alerted by a history of amnesic episodes, or by hearing that the patient's wardrobe contains clothes that they cannot account for or by asking them to keep a diary and finding that it contains differing hand-writing styles.

The existence of the personalities is usually only demonstrated by hypnotising the patient and asking for their hidden self, the part the therapist has not met, to come forward. This it does. Very frequently the therapist then spends a great deal of time with their prize patient - much as Breuer did with Anna O and Prince with Sally Beauchamp. During the course of this time, further personalities appear. Initially these are all very fleeting and undeveloped but with time they appear to establish a greater resonance. Janet had argued that naming the personality gives it a focus around which to crystallise.

It is usual to designate one personality as the host and the others as alters. The alters typically have different names, different tastes, often different voices and accents as well as different

interests. The personalities may be variably amnesic for each other, although general knowledge is usually shared between them. There are some indications of physiological changes concomitant with changes in personality. For example, cases have been reported where one of the personalities was heavily sedated by 5 mg of diazepam but others could tolerate up to 50 mg. Interesting and indeed surprising as this is, readers should not be persuaded that this implies the personalities are fundamentally different entities. Many readers would be sedated by 5 mg. of diazepam but if faced with the stress of an interview or having to deliver a speech could tolerate 50 mg without much sedative effect. It differs little from the situation of Miss Beauchamp, one of whom got drunk on one glass of wine, whereas another could take six to eight without apparent effect. Other physiological changes have been reports of altered thyroid function and allergy pattern between personalities.

The physiological data seems to support the "reality" of MPD. However, there are a number of oddities of the condition that argue against this reality. Both today and at the end of the last century, has been its predominance in the U.S. Another is that several years ago there appeared to be a distinct US fashion for the abuse to have occurred as part of a satanic ritual - a fashion that then migrated to the U.K. and elsewhere A more recent fashion appears to be that the abuse occurs on spaceships following abduction by aliens.

In both the satanic ritual and spaceship abduction scenarios, the abuse has been described in great and vivid detail by subjects, with apparent reliving rather than just remembering being demonstrated in some. A clear cut case surely of the mixing of truth and fantasy noted by Freud! While such cases certainly do point to the hazards of psychodynamic interpretation, it must also be noted that the truth and fantasy being mixed do not derive from any degenerate endogenous source. Rather the spaceships and the rituals clearly have their origins in environmental inputs of some sort.

What causes MPD? The current view (among those who believe in the existence of the condition) is that children, especially between the ages of four to ten, dissociate readily and spend quite a bit of time talking to imaginary companions anyway. The occurrence of trauma at this time, it is argued, somehow makes subjects subsequently more liable to dissociate than others. In the course of some abuse or trauma, the original personality dissociates into a subject, who lives in a world where abuse happens, and a subject who is unaware of the abuse or the traumatic event. This is made a more clearly multiple personality picture, if the perpetrator of the abuse, as they often appear to do, suggests that they have two little girls, one of whom shares a secret with them and the other of whom knows nothing of what is going on - a creation of personalities by a form of hypnosis. This explanation closely resembles the one offered by Breuer to account for the features of the Anna O case.

NeoDissociation

The neo-dissociative hypothesis did, however, produce one piece of experimental evidence directly relevant to multiple personality disorder. It had been known since Janet, that most people and certainly most hypnotisable individuals, show a phenomenon called automatic writing. If, while holding a pen over a piece of paper, attention is distracted in a way that leaves the pen in close proximity with the paper, many individuals will find on looking back at the paper that they have doodled or made marks on it. If this is done often enough, some subjects can produce coherent sentences, seemingly unbeknownst to themselves.

While studying the phenomenon of analgesia under hypnosis, Hilgard tapped into something similar to automatic writing. He asked subjects, being subject to a variety of experimental pains but who seemed indifferent to the pain, to indicate if some part of them was registering the pain nevertheless. The outcome was that subjects were able to indicate by a variety of means, including writing, that they were in pain, while at the same time verbally reporting that they felt little or no pain. On the basis of these findings, he postulated that in hypnosis a "hidden observer" remains in touch with "reality" in some fashion. The notion of a hidden observer fits in well with the proposal that multiple personality disorder may derive from the mobilisation of a dissociative mechanism in response to trauma. There are serious problems with the idea that a hidden observer may remain in some way in contact with reality, while the rest of us dissociates.

Comparing his neo-dissociation theory with Janet's concept of dissociation, Hilgard suggested that neo-dissociation, as he envisaged it, occurred strictly within consciousness and suggested a model of consciousness in which there are overlapping compartments. Janet, in contrast, he argued had proposed a layered model of consciousness, in which there was both conscious and subconscious processing. Both, however, involve mechanisms that lie within consciousness, in contrast to the Freudian model of the psyche, which postulated a radical unconscious.

While Freudian views were dominant, dissociation remained a dubious concept. With the endorsement of a number of dissociative disorders in DSM 111, researchers have felt freer to explore the empirical occurrence of dissociative states, as opposed to the artificial creation of dissociation in laboratory settings. This has led to the development of a number of scales aimed at assessing the frequency of dissociation and giving an index of individual dissociability. It seems certain that significant numbers of dissociative states will be found to occur widely and frequently, which raises the question of how such widespread occurrence could have been so completely ignored.

Before attempting to answer this, there is one further state to consider in which consciousness splits and in which seemingly hidden observers can record events that conscious selves are unaware of - anaesthesia.

CONSCIOUSNESS and ANAESTHESIA

The first point to be made is that just as there is no well worked out definition of dissociation, so also there is no good working definition of anaesthesia. This may appear to be a wild and startling wild claim but it is literally the case. Anaesthesia is what happens when a subject being operated on does not complain. While it has been termed the therapeutic sleep, anaesthesia is not the same thing as sleep. It can be induced in subjects who are apparently fully awake. It can be induced by hypnosis or by drugs and the hypnotic procedures to be used or the amount of drugs needed for induction are well known. But as to what it is these techniques actually do apart from stopping a subject being distressed, no-one can clearly say.

Until recently, there was little interest in this issue, partly because anaesthetics so obviously work. Until a few years ago patients, who reported post-operatively that they had been aware of events happening during their operation were treated to the full weight of medical disdain. In a typical case of awareness under anaesthesia, the experience is one of being quite lucid, although mercifully not in pain. There is however no way of communicating this state to the observing anaesthesist, as muscle relaxants are usually also given so that the subject is

incapable of any movement, even that of blinking an eye. They can simply stare helplessly out as their anaesthesist stares in, while checking for pupillary responsiveness to light. However, a minority of cases in this state are aware and in pain, often of an excruciating kind. It has been through the efforts of these subjects to receive redress that the phenomenon of awareness under anaesthesia has been slowly coming to light.

Some very curious findings have been trickling out. In 1965, a South African psychologist called Leavinson arranged to have 10 volunteer subjects going to surgery anaesthetised more heavily than usual - close to the limits of safety. These subjects were not consciously aware of anything. During the procedure, a mock crisis was staged in which the theatre staff acted as though the patient's responses indicated some serious internal problem with potential loss of life. This was brief and afterwards the anaesthesia was brought back to normal levels and surgery continued. Post-operatively the patients remembered nothing of the operation - until they were hypnotised. Under hypnosis however four of the ten were able to repeat the precise words used by the various actors in the crisis and four others were able to give a good account of what had happened.

This report was not taken up at the time of first publication. But more recently, a number of studies have shown that suggestions under anaesthesia that the operation is proceeding smoothly and that there are unlikely to be post-operative complications have led to reduced requirements for post-operative analgesia and a shorter stay in hospital. These issues all return us to the question of what is consciousness? We process more information than we are ever aware of. What is it that restricts entry into awareness?

There is no simple answer. Many of the agents which suppress awareness and are used accordingly for anaesthesia, such as the barbiturates and benzodiazepines are also amnestic agents - they bring about forgetfulness. But the very same agents have been used extensively during two world wars and in other traumatic situations for abreaction - to recover memories. Often under the influence of these drugs, soldiers during the war could be induced to relive traumatic events with all the verisimilitude that characterised the reliving of sexual assaults under hypnosis for Freud or Janet.

Dissociative Anaesthesia

There is another phenomenon that is pertinent here, which is the issue of what are now called the consciousness expanding or psychedelic drugs. A variety of such compounds have been used by various peoples throughout history. The best known of these was mescal used by some Native Americans but there have been scores of such drugs in use worldwide, including magic mushrooms and hashish.

The story developed in complexity and pace in 1948, with the accidental discovery of the psychotropic properties of LSD by Hofmann. This was one of a number of derivatives of ergotamine, which were synthesised in the search for a muscular relaxant. It turned out to be a poor relaxant. Some spilt in the laboratory and was accidentally ingested by Hoffman, who shortly afterwards found his world apparently changing shape, texture and colour. His experiences led to the investigation of the psychotropic properties of LSD.

These include the experience of seemingly having buried material from ones past life re-emerge into consciousness. In some cases, subjects seem to relive rather than simply

remember past episodes, especially past traumata. In other cases, there may be intense depersonalisation, derealisation, deja vu, jamais vu or out of body experiences.

LSD was quickly pressed into therapeutic use. It gained acceptance as an abreactive agent, which investigators in the 1950s and 1960s thought would allow them to penetrate incisively into the subconscious. The word psycholytic was used to describe its effects - this literally means a cutting into the psyche. It was used in the treatment of alcoholics, with the stated therapeutic goal of taking apart the ego of the addict, in the hope that when they reassembled themselves their dependence on the addiction might be lessened. This approach was seen as mobilising the inner resources of the patient rather than the more orthodox approach of highlighting the weaknesses of the alcoholic and attempting to shame them into abstinence. A number of studies were reported in the pages of the American Journal of Psychiatry during the 1960s in support of an efficacy of this treatment.

The relevance of all this to our subject matter is that LSD was also used as an anaesthetic agent for surgery. It was excellent as such but its duration of action, between 8 to 16 hours, was a serious drawback. Another agent, introduced by Parke-Davis in 1957, phencyclidine (PCP) proved better in this regard. In many respects PCP was almost the ideal anaesthetic. It had few adverse effects on cardiac or respiratory function - unlike the other agents in use, then and now. Its effects on the psyche were also quite different in that subjects were not put to sleep so much as dissociated and indifferent to surgical procedures. PCP however had a serious drawback in that up to 1/3rd of those taking it were quite disoriented post-operatively. In such states a number of patients seemed not to know who or where they were. Some became violent. Others were seemingly awake but hallucinating. PCP was withdrawn from the market. It has since gone underground and is widely abused in the USA.

It has been replaced in anaesthetic practice by ketamine, which has minimal emergence side effects, most of which can be abolished by diazepam and which also has the advantage of a short duration of activity - 1 to 2 hours. Like PCP, ketamine dissociates rather than sedates. Subjects who have not been given muscular relaxants, so that they can move an arm for example to indicate awareness of the location and quality of their pain, are able to do so while at the same time remaining indifferent to it.

In surgical situations, the subjective effects of ketamine have not been well characterised, owing it would seem to the almost startling lack of interest in such effects on the part of anaesthetists and surgeons. But when taken in laboratory settings, the effects are similar to those of LSD. These include feeling light, experiences of altered body consistency, shape or size, an awareness of a bright light on the edge of consciousness, feelings of timelessness, radiant visions, insight on the riddles of existence, out of body experiences and dissolution experiences.

What does ketamine do? In a recent volume on consciousness in contemporary science, to which cognitive neuropsychologists and philosophers contributed, Richard Gregory has noted that the philosophical debate about consciousness could potentially go on forever without coming to a resolution. He suggested one way out of the impasse would be for those concerned with the issue of consciousness to take a variety of anaesthetics, which after all affect consciousness in some way, following which attempts to produce models of consciousness might be more dynamic. He himself took ketamine and reported on its effects. In a laboratory setting, in which he was closely monitored and required to attempt to complete

a set of psychological tests at regular intervals, the principal effect was perceptual instability. Sensation, in the sense of colour vision, visual acuity and auditory recognition was normal. But when it came to putting sensations together into percepts, the percepts were unstable. Alarmingly and uncomfortably so.

Commenting on consciousness, informed by his experience under ketamine, Gregory suggested that we become conscious in the face of novelty. For example, when we have put on our clothes, we may be aware of them for a brief period afterwards, or a longer period in the case of new shoes for instance, but pretty soon owing to a lack of novelty we stop being conscious of them. In general he suggested that when our representations of the world fail to account for what is happening, we become aware of the discrepancy - "consciousness is always associated with some surprise".

On this basis, an agent like ketamine which interferes with perceptual stability is highly likely to alter consciousness. The surprising thing about producing an altered state of consciousness, as opposed to simply sedating or alerting someone, is how it easy it is to do. Hyperventilating for several minutes will produce many of the effects of ketamine, as will its opposite, breathing in carbon dioxide. Sensory deprivation also produces a very similar picture. Fevers alter consciousness. Deep relaxation will do so as well, as does high anxiety. Relatively abrupt changes in sensory input or physiological conditions, therefore, seem capable of disrupting the normal state of consciousness.

If we add to this Janet's contention, that there is no such thing as a neutral consciousness, which just happens to be some extra to me. There is no consciousness that is not in some way personal consciousness. Personal concerns and prior knowledge shape what ends up in consciousness. Adding this produces the equation that relatively small physiological changes may produce a very different awareness of myself.

There are two issues of pertinence here to the dilemmas that faced Breuer, Janet and Freud. The first is that subjects on ketamine or in altered states of consciousness often seemingly vividly relive their past. This became clear in the late 1950's, as scenes of childhood trauma emerged under LSD. Under the influence of analysis, these were invariably dismissed as fantasies at the time. More recently ketamine and hyperventilation have been used as abreactive agents in place of LSD in a few centres (although this is not widely advertised).

Although the balance has now swung back toward believing the evidence pointing toward trauma that emerges from such sessions, there is a problem. Individuals on ketamine or LSD not only relive episodes from childhood but they may also seemingly relive their birth or experience themselves as someone else from a different time or place. This first became disconcertingly clear in clinical work using LSD in the 1960s. Far from simply penetrating the unconscious and uncovering the expected erotic impulses and Oedipal conflicts, investigators found that subjects were more likely to "go transcendental".

Is this a mixing of truth and fantasy? What controls entry into consciousness - is it unconscious fantasies or something else? The common explanation given by subjects, on ketamine or LSD, is that they have somehow contacted the transcendent ground of being and that therefore their experiences derive from some supra-conscious source. This is obviously quite problematic for a scientific psychology, aiming at probing the mechanical workings of the

psyche. As will become clear, the depth psychologies while aiming at biological validity, have always tended to derail into mysticism or parapsychology.

Despite, these transcendental difficulties, the exploration of awareness under anaesthesia and the neuropsychology of dissociative agents means that once again, it has become possible to talk about a biology of dissociation, so that dissociative theories of the neuroses are no longer disadvantaged compared to psychoanalysis or behaviourism. But before tackling further the question of consciousness and the role of altered states of consciousness in the neuroses, we have one further set of dissociative phenomena to consider, the post-traumatic stress disorders.

6 THE TRAUMATIC NEUROSES

On September 15th 1830, the world's first passenger railway line opened between Liverpool and Manchester. Shortly after the opening the first train crashes occurred. A growing number of accidents left victims that were significantly disabled - paralysed, blind, deaf or anaesthetic - but without clear cut organic lesions. Insurance claims against the railway companies focused attention on these conditions, which were called traumatic neuroses. At the same time, other traumatic neuroses were being noted arising from accidents at work. From 1880 onwards, various European countries enacted legislation to provide compensation for traumatically injured workers.

Many prominent physicians believed that potential access to insurance monies or to compensation from the state, could not but lead some citizens to "set out on a broad road of imposture and dissimulation". Others concluded that these conditions were the result of the psychological shock of the accident; given "the vastness of the destructive forces, the magnitude of the results and the imminent danger to the lives of a number of human beings and the hopelessness of escape". (Freud was train phobic). Against both of these possibilities, it is probable that a proportion of such cases had whiplash type injuries.

Charcot's work on the traumatic neuroses was the first to demonstrate that many of these could be alleviated by hypnosis and conversely that hypnotised subjects could produce the symptomatology found in the traumatic disorders. He also noted that these conditions shared many symptoms in common with hysteria, such as hemianaesthesia.

Both he and Janet accordingly saw the traumatic neuroses as variants of hysteria. Charcot, however, considered that what was involved was the mobilisation of a degenerate reflex by the traumatic event. Janet in contrast was more clearly aware of the psychological aftereffects of trauma. Others argued that there were differences to hysteria, especially in the relative intractability of the traumatic neuroses to treatment.

While the European railways threw up the first cases of post-traumatic neurosis, the American Civil War provided another important milestone in the development of the problem. In the American Journal of the Military Sciences, in 1871, Jacob Mendes DaCosta reported a condition he called irritable heart. He described the case of William Henry H who had enlisted in the army in 1862. He appeared to be in good health then and was a hard worker. He admitted to being anxious before the Battle of Fredericksberg. But after the battle he had severe pains in his chest and palpitations. Between the pains and the palpitations, he was unable to move. Subsequently the symptoms recurred during military duties, especially while on the march. After being wounded in the battle of Gettysburg, he was so incapacitated that he was confined to bed.

Da Costa could find no evidence of a structural change in his heart - there were no murmurs of the type that might result from the valves not working, there were no irregularities of the pulse. He concluded that the disorder might be functional in the sense of arising from an irritability conveyed to the heart by the action of the recently discovered sympathetic nerves. Irritable heart or Da Costa's syndrome was later diagnosed in soldiers following the Franco-Prussian War of 1870 and the Boer Wars of the 1890s.

Da Costa's syndrome is a term still in use today, for chest pains in men without an obvious cardiac cause. It is the commonest cause of cardiac investigations - a male version of Briquet's syndrome. Another term for it is a cardiac neurosis, which Freud admitted to having - although at a time when its implication was decidedly physical rather psychological. It might also be called an anxiety neurosis but there was no such term as anxiety neurosis in 1870. Westphal had described agoraphobia in 1871 and obsessive-compulsive disorder in 1878. In 1893, Hecker distinguished a state corresponding to Da Costa's syndrome and called it anxiety neurosis but meant by this, like Da Costa, a state in which the nerves to the heart were somehow physically disturbed. In contrast, Wernicke in 1894 described an anxiety psychosis - a state closer to the modern notion of an anxiety neurosis.

In 1895, Freud distinguished between neurasthenia, which he still saw as an actual neurosis caused by excessive masturbation, and anxiety neurosis which was a psycho-neurosis, whose form was determined by the psychological effects of failing to complete the sexual act properly - as in coitus interruptus. This, he held, was even the case where the condition came on, for example, in a man who had just received news of his father's death. Close questioning, he argued, would reveal that such a man would perhaps have been practising coitus interruptus for several years and that the news was only the final precipitant of the disturbance. Unlike Da Costa's syndrome, which came to be reserved for conditions that affected the heart predominantly, the term anxiety neurosis came to be applied to states where there might be fainting today, chest pains tomorrow and diarrhoea the day after.

THE CRUCIBLE OF WAR

These developments in the understanding of anxiety and hysteria laid the seeds for a conflict between the medical view that the neuroses involved an hereditary degeneration, an environmentalist view as espoused by Janet (and originally by Freud) and the subsequently developed psychoanalytic views. World War 1 was to provide the first important testing ground.

Whatever the view of the problem, what we can term for the moment "battle neuroses" are not new. Herodotus giving an account of the battle of Marathon in 490 BC described the case of Epizelus, the son of Cuphagorus. This "Athenian soldier was fighting bravely when he suddenly lost the sight of both eyes, though nothing had touched him anywhere - neither sword, spear nor missile. From that moment, he continued to be blinded as long as he lived. I am told that in speaking about what had happened to him he used to say that he fancied he was opposed by a man of great stature in heavy armour whose beard overshadowed his shield, but the phantom passed him by and killed the man at his side".

Unlike in previous wars, from early in World War 1 a remarkably large number of soldiers succumbed to traumatic neuroses. The condition was popularly termed shellshock. The stigmata of shellshock were amnesia, loss of sight, or of hearing, aphonia, paralyses and contractures. These are essentially Janet's symptoms of hysteria. Da Costa's syndrome and a range of anxiety neuroses were also found. The number of soldiers affected steadily increased during the war. It is estimated that over a quarter of a million from the British ranks alone were affected. Of these a greater proportion were from among the officer ranks. This posed a problem for degeneracy theory. Could so many have hereditary degeneration? Could hereditary degeneration afflict the ruling classes even more than the working classes? How was such a problem to be managed?

Shell-shock appears to have been more common during World War 1 than in any previous war, which might argue against a psychological interpretation. Medical authorities opposed to the idea of a psychological disorder offered one possibility - the shells from which it got its name were deployed for the first time on a large scale in World War 1. There were several cases of individuals, who had been killed by shells exploding nearby but who seemed superficially uninjured. A handful of these at post-mortem were found to have minor tears and haemorrhages in their spinal cords. This is not dissimilar to the effects of concussion, which can kill and leave similar sequelae - or to those of whiplash. It was argued that these blast effects might give rise to shell shock. There was even some speculation that the bullet-wind of machine guns might potentially bring about similar damage. Another concept invoked was diachisis, a supposed alteration of physiological connections between areas of the brain consequent on an insult, whether a stroke or trauma of either physical or psychological origin.

The issue was important as there seemed to the medical establishment to be only two options. One was that there was a genuine neurological disorder, in which case the soldier might be invalided home and would be entitled to a pension. (Da Costa, as befits a military surgeon, had solved this problem as regards cardiac conditions by postulating that the sympathetic nerves were actually genuinely disordered and affecting the heart as a consequence). The other option was malingering/cowardice. In this case, court martial was a strong possibility as well as execution. The numbers involved may well have been the only thing that prevented mass execution. Sufficient court martials could not have been held, whatever about the logistics of organising the executions. Many, it seems felt that executions might be called for, if only as a discouragement to others, given the proportions of the problem and the risk of mass defections from the front line.

An alternative solution would have been possible if psychologists could reliably distinguish shellshock from malingering. They couldn't but despite difficulties in making the distinction, it was nevertheless widely accepted that the two were different conditions. The arguments offered were a variation on the theme of although I may not be able to tell you what the difference is between a pony and a donkey, I know it when I see it.

If the physical effects of shells impacting did not cause shell shock in other than a small proportion of cases, was there any thing unique about World War 1 that could account for the disorder? A consensus of opinion points toward one further possibility. In this, as in no previous war, troops were unskilled and the technologies with which the war was fought were frighteningly impersonal. The role of the average soldier and officer was to simply stay in trenches, while subjected to aerial bombardments, and to go over the top to provide cannon fodder when ordered.

There was no scope for individual skill in the art of combat, no scope for strategic cutting and running, as in previous wars, and no scope therefore for exerting an element of personal control over one's fate. More than in any other war there was a clash between duty and likely survival. This provides just the kind of stimulus liable to produce a psychological as opposed to a mental or neurological disorder.

Alienists and Analysts

Martin Stone notes that in both the popular and academic minds, the influence of Freud is credited with the transformation of psychiatry in our times from a pessimistic, asylum based discipline to a community oriented, relatively optimistic science. In the popular view,

psychoanalysis supposedly emphasised the environmental determinants of mental illness and posited common links between normal mental functioning and abnormal psychological states.

However, the belief that psychoanalysis supported an environmentally determined view of mental illness seems rather to have been an after-glow from the original seduction hypothesis. Nowhere is this more clear than in analysts' views about shell shock. In seeking to tackle the problem, the army turned not to asylum based alienists (psychiatrists), who appeared to have little to offer but rather to psychologists, who were quick to offer their services. A wide variety of psychodynamic therapists took part in the war effort. It was found by many that cures could be achieved by enabling the individual to remember trauma that had happened them. To those therapists who were not analysts, it seemed impossible to believe that pre-existent sexual problems could be at the heart of the condition. It seemed much more obvious to talk in terms of purely environmentally determined fear.

Far from accepting this view, the psychoanalysts saw what was happening as a magnificent confirmation of their beliefs. In war, they argued, the repressions of civilised life were dropped and barbarism rose to the surface. Commanding officers were literally father-figures, or older brothers, furnishing the affected victims with a rerun of infantile situations and arousing primal sadistic and homosexual impulses. The outer war reflected the primal war of infancy. Shellshock was merely the environmental trigger that brought about collapse. In favour of this they noted that many cases arose that were not the consequence of involvement in a shocking situation. Commenting on the war neuroses consequent on World War 2, Otto Fenichel was later to remark that "trauma that upset the entire economy of mental energy also of necessity upsets the equilibrium between repressed impulses and repressing forces".

As Freud put himself put it repression, which lies at the basis of all neuroses, involves a reaction to primal trauma. Indeed, the very war itself, he argued, represented a demonstration of the basic truths of psychoanalysis, showing that so-called civilization rested on a basis of repressed primal impulses. Men in war do not sink so low as people think; rather it is people in peace who have not risen so high as they believe.

Despite losing much of its scientific legitimacy in the eyes of many as a result of such views, psychoanalysis, as the best organised, most coherently formulated and most vehemently proselytising psychotherapy was well placed at the end of World War 1 to take advantage of the drastic institutional and legislative changes forced on asylum psychiatry by the war. Paradoxically the other group well placed were the asylum psychiatrists.

Ever since the asylum building movement in the 19th century, there had been a tension between medical and social approaches to a number of the mental disorders. In the absence of reliably demonstrable medical lesions, social theorists argued that the medical establishment had commandeered a range of problems that it had no real expertise in treating and from which it had no right to exclude other interested parties. In reply the medical establishment argued that, while no lesions could be offered at present, the stigmata of the various conditions suggested that one would be found. Besides which medical treatment saved patients from misguided morality, which was often their lot under social regimes. While hereditary degeneration as opposed to environmental determinants could be invoked, asylum doctors got away with their claims.

With shellshock the fragile hegemony of the alienists was compromised. Drastic changes were necessitated by the sheer size of the population of victims of shellshock. It was necessary to provide a range of non-asylum treatment facilites after the war for their management. The first outpatient clinics were opened, and these provided the nucleus of a new psychiatric service. In addition, the spectacle of so many of the finest and apparently stable men developing shellshock put a serious dent in the notion of degeneracy.

However, while the war threatened traditional psychiatric beliefs, it also provided an opportunity for the extension of psychiatric power and influence and paradoxically was de facto responsible for an increasing medicalisation of social problems. Broadening public perceptions of what constituted mental problems was one thing but who was to treat them? Those who were already handling mental problems were inevitably best placed to continue in power.

A political compromise was arrived at, in which professions other than the medical profession were introduced into the mental health arena, as part of the mental health team, under the medical aegis. Effective political power therefore remained concentrated in the hands of a group whose private sympathies were often still with the degeneracy view and whose professional commitment was to finding the biological faults or failings at the heart of the neuroses. A degeneracy view, therefore, survived in both medical and psychological camps, despite the evidence of the war and in the face of an increasing public consensus. World War 2 was to show medical and psychoanalytic views were to prove compatible bedfellows.

World War 2

World War 2 provided a second round in the contest between medical, analytic and environmental establishments. Knowing some thing of what to expect, the medico-political response to shell shock was more sophisticated the second time around.

Discharges from battle were for battle neuroses were to be with out pensions as, it was thought, the possibility of obtaining pensions would be conducive to such reactions. More importantly, a clear decision was taken on all sides to suppress information about the possibility of war neuroses. It was held that public interest in neurotic reactions was a good breeding ground for the manifestations of symptoms in potential neurotics. Where information was disseminated, it was to the effect that there was an almost unlimited human resistance to stress and that breakdown implied that the subject must have something else wrong with them.

While a stressful precipitant was not denied, it was argued in Europe that there had to be a constitutional predisposition to neurotic reactions before the effects of shock were seen as neuroses. The appeal to a neurotic constitution was an updating of 19th century degeneracy theories. This was advocated most forcefully by William Sargant and Eliot Slater, who were among the most eminent of British psychiatrists after the war. The evidence for the supposed neurotic constitution was almost entirely lacking however.

In America poor parenting was held to be the cause. One American study cited as evidence the fact that 66% of war neurotics had been nail-biters at some time. In the same study, it was claimed that the fathers of typical war neurotics were sadistic and alcoholic while the mothers were nervous and over-solicitous.

Sargant and Slater argued that the mechanism behind shellshock was similar to what had happened Pavlov's dogs when flooded in his Leningrad laboratory. Pavlov had been working

on the conditioning of reflexes as the basis of behaviour. Dogs trained to associate feeding with the ringing of a bell came to salivate, when a bell was rung. After a flood in his laboratory, Pavlov had claimed that those dogs with the weakest constitutions came off worse and were often untrainable afterwards. In contrast, the shock was sometimes beneficial to dogs with better constitutions. There is no record of what constituted a good or a bad constitution other than Pavlov's opinion. Sargant and Slater argued that those suffering from war neuroses were "emotionally immature, constitutionally anxious or had personalities that were otherwise feeble, fragile or unstable". "Many such men if permitted to live out their life in peace would never have known what it was to shake, sweat, tremble and be woken by nightmares".

Added to this were observations that individuals rarely showed signs of collapse, if they had not also lost considerable amounts of weight. This observation stemmed directly from the observations of Weir Mitchell on neurasthenia in the 1870's. He argued that potentially aberrant nervous functioning was laid bare by weight loss and treated the condition by the famous rest cure. This involved rest but also a concerted effort to get the patient to gain weight – two or three stone if possible. An updated form of this involved the use of Insulin to promote weight gain.

Sargant and Slater also invoked the evidence of a seemingly successful physical treatment. Heavy sedation with barbiturates, it was claimed, would often reverse the effects of shellshock if the individual was treated shortly after its onset but not if the condition had become chronic. Toward the end of the war electroconvulsive therapy (ECT) came into clinical use and also appeared to be useful in many cases. This, at the time, was thought to be useful in shellshock by virtue of a "depatterning" effect, which would interrupt recent learning.

In America, it was argued that the constitutional basis of the war neuroses lay in fundamental Freudian dynamics. As Grinker and Spiegel put it, the subsequent nightmares of past battles in distant lands took the place of nightmares about the subject's real fears - pilots who had dreams of planes exploding in mid-air were actually displaying their fears of a first sexual encounter. There was debate as to whether the war neuroses were real neuroses, in that they often happened to apparently normal characters and often appeared to clear up completely. Grinker and Spiegel argued for their neurotic reality on the basis of their sharing common mechanisms with real neuroses such as regression and repression.

Recovery, they argued, came about because a temporary retreat from reality allowed the ego to gain much needed gratification and hence strength to regroup and continue. After draining themselves by giving their all, such soldiers needed replenishment, which would happen by the natural developmental mechanism supposedly found in children - that of demanding constantly and not giving anything. When their officers or authority figures were not forthcoming, this could, as in the case of children, call forth sullenness and rebelliousness.

Grinker and Spiegel argued strongly for the use of brief focussed psychotherapies for such conditions. Thus a soldier who had lost a comrade and felt guilty about the loss but also guilty at feeling some antagonism to the dead comrade, might be shown to have really been reacting to the potential loss of a brother or father. The comrade perhaps could be shown to be someone with whom the soldier was competing with in some way - to kill the greater number of the enemy for example - in a manner similar to the way he had competed previously with a brother. The "irrational" emotions toward the dead comrade could then be attributed to the earlier relationship. Such insights apparently solved the problem.

Chemical Abreaction

Stemming from the experience of both the British and the Americans during the war, a further development took place. It was found that under sedation, abreactions could be successfully conducted. As sedation with barbiturates was much easier to produce than hypnosis, it increasingly took over. Amphetamines were sometimes added to the barbiturate to emotionally excite the individual in the hope that if sedation did not knock out his censor, then it might be overwhelmed by a combination of psychic excitement and physical immobility. There were modest successes with this line of treatment.

Thirty years ago, such chemical abreactions were a regular part of practice in psychiatric hospitals. As they have completely gone out of vogue now, one can only assume that the gains were relatively modest. But one consequence of this form of treatment was that abreaction (the quintessential psychological treatment) was medicalised, as only medically trained individuals were to be entrusted with these potent psychoactive agents. Furthermore, while disappearing from hospital practice, the influence of such approaches did not disappear. Arguably a further consequence of this approach was the widespread chemical tranquillisation of anxiety that began developing during the 1960s, ending up in the 1970s and 1980s as a major iatrogenic problem.

THE SUPPRESSION OF HYSTERIA

Once World War II was over, orthodox academic interest in the traumatic neuroses appears to have dissipated very quickly. Within a few years the textbooks no longer had a separate section on the traumatic neuroses. Even Slater and Roth's Clinical Psychiatry, perhaps the most authoritative of the British textbooks dropped its separate section on these disorders. They were subsumed under the section on hysteria. Hysteria itself shrank progressively in size in textbooks and became an increasingly rare diagnosis. This was not the consequence of medical advances but rather medical suppression.

Slater

In 1965, Eliot Slater administered what is widely seen, among an older generation of psychiatrists, as the coup de grace to hysteria, in a British Medical Journal article. With caveats, he was prepared to accept the use of hysterical as an adjective to describe certain reactions a subject might have. But he firmly set his sights against the notion of hysteria as an entity in its own right. It was never diagnosed, he said, other than as an assertion of a universal negative - that is if the subject had no physical illness and was not depressed or schizophrenic, then in the absence of anything else they were diagnosed as hysterical. There were no true features that hysteria had that might not be produced by other illnesses. Even dissociation, he argued, was entirely normal; anyone who looks through a microscope dissociates from what the unused eye might be seeing. A diagnosis of hysteria rested on the absence of any other diseases and typically also on dislike of a patient or on the bizarre quality of their presentation.

Taking a sample of 99 patients seen during the 1950s in the National Hospital for Nervous Disorders and given the diagnosis of hysteria, Slater could not satisfy himself that they possessed any common features. Many, he claimed, had been misdiagnosed as they later showed up with real conditions. Many others failed to get well and appear to have been excluded as a result of their chronicity. Others presented again later with different clinical features for which again no diagnosis could be found. This was the common experience of many of the follow up studies done on subjects who had been labelled as having hysteria.

In the face of this broadside, it quickly became almost impossible to make a diagnosis of hysteria in Britain. Anyone doing so was liable to end up with egg on their face, as it was assumed that Slater's data proved that the patient would later turn up with a real disorder that retrospectively could be seen to have caused the initial symptoms. Besides this implication, there was also the suggestion that diagnosing hysteria indicated psychological difficulties on the part of the diagnostician almost as much as on the part of the patient.

While Slater ends his classic article with the admonition that the diagnosis of hysteria is a disguise for ignorance and a fertile source of clinical error and as such was both a snare and a delusion, this is not the whole story. In the 1969, edition of Slater and Roth's classic Clinical Psychiatry hysteria is presented in a very nuanced and balanced way. The term hysterical illness is used widely. Its psychological origins are noted. The clinical features of trances, amnesias and splitting of the personality are described in detail.

Therefore, the marvellous piece of medical polemic that is the BMJ article stands somewhat apart from other views with which Slater's name can be associated. The impact of the BMJ article would seem to reflect a willingness of the general psychiatric establishment to receive such a view. One explanation that can be offered for this willingness to deny the existence of hysteria is that the generation of therapists, who have most doubted its existence, could not afford to acknowledge its reality. As members of the war effort, they could not afford to accept that war was psychologically damaging. Better dead than discharged from service was the medical position in World War 2, as discharge to recover from nerves, it was thought, would increase the general level of disaffection with the war effort.

The contributions of psychiatrists to the war effort from both sides of the Atlantic, from a perspective of 40 years remove, read very naively. That therapy during the war was a mask for social engineering is all too evident. This being the case, it might be expected that such a generation would seize on apparent "scientific" support of their position.

Slater's views should also be seen against a background of his own deeply held wish that psychiatry should become as scientific as other branches of medicine. Only physical treatments that could be adequately standardised and reliably delivered, he felt, could bring about such a scientific basis and allow the psychiatrist to "cut the cackle".

There was a dark side to this, however. In line with the experience of modified insulin treatment of the war neuroses, Sargant and Slater after the war in their "best-selling" Physical Methods of Treatment in Psychiatry advocated the use of insulin coma treatment for schizophrenia and prefrontal leucotomy for refractory conditions of all sorts. As they delivered their message, it appeared that their advocacy was based solely on unimpeachable evidence.

However, within three years of the appearance of their book, insulin coma therapy had disappeared entirely and the supposed evidence for it had been shown to be worthless. Prefrontal leucotomy followed almost immediately afterwards. While many psychiatrists trained in that generation are still wary of using the term hysteria, there are others who can be found to wonder how they came to be conned into using the physical treatments advocated by Sargant and Slater. This point is important as much of the public support for the antipsychiatry movement of the 1960s almost certainly came, not from opposition to the theoretical tenets of

orthodox psychiatry, as pilloried by Laing, but rather from deep-seated unease at the methods of treatment being used.

Crazy like a Fox

There are many other reasons why the present mental health establishment might have reservations about hysteria. I have suggested in The Suspended Revolution that most bizarre behaviour is psychological in origin. Actual disturbances of neuropsychological functioning, when they occur, do not, except in a small number of patients, give rise to truly bizarre behaviour. The lack of insight typically associated with a psychosis cannot be shown to be the result of cerebral dysfunction but rather is more plausibly explained as a set of psychological reactions to underlying dysfunctions. It follows from this that a great many of the patients who become chronic psychiatric patients must do so for neurotic reasons rather than by virtue of having a severe psychosis. If so, the appropriate treatment of such patients will embrace psychological approaches rather simply rely on drug treatments alone. These issues go to the heart of the ambiguities inherent in the word psychosis.

Psychiatry appears to have a blind spot for this point. We are quite happy to claim that many gastro-intestinal problems have no organic basis in gut disorder. Only we do not call this condition hysteria at present but rather Briquet's syndrome. Similarly, we have been able to show that the commonest cause for cardiac investigations in **civilian** populations is effort syndrome/DaCosta's syndrome/cardiac neurosis. Again this is not called hysteria.

But we do not seem to see that the same point might apply to mental disorders. We have no problems in seeing that "hysterics" may simulate gut or cardiac problems or epilepsy, but we do not appear to expect any of them to simulate madness. This point was noted by Janet, who argued that most seemingly psychotic behaviour involves acting and should not be taken seriously. Supposedly psychotic patients, he claimed, often try to impress by the grandeur of their guilt, in which they themselves believe only half-heartedly or not at all.

Perhaps we are particularly blind to these aspects of madness today, as the dominant language and paradigm of psychiatry has for 2 decades now been solely biological. It is very difficult to fit notions of playfulness or inconsistency into formulations such as the dopamine hypothesis of schizophrenia or the catecholamine theories of depression. And yet all the evidence points to the fact that the presentation of hysteria adopts the illness language of the day.

A particularly dramatic example of what is involved has recently come to light in the case of Charcot's Grande Hysterie. With Charcot's death and the rise of the dynamic psychologies, neurology and psychiatry went separate ways. Neurologists were no longer interested in hysterical convulsions. At this time Grande Hysterie seemingly disappeared. So much so that many experts came to doubt that there ever really was such a clinical phenomenon. Charcot's patients must have been fooling him, it is hinted. However far from disappearing completely, grand epileptiform hysteria was recently rediscovered in a Kentucky backwoods setting. It has been argued that the reason for this is because the modern myths of what are acceptable clinical presentations have not spread to such places.

It may seem ironic but any dispassionate reading of such evidence should suggest that there is nowhere better for modern hysteria to hide than in a psychiatric setting. The situation in psychiatry today is not unlike that of neurology in Charcot's day. We can reliably diagnose

many conditions when they present in ideal forms. But our wards and practices are full of individuals, who by force of diagnostic requirements get labelled atypical affective disorders or schizophrenics, who at best approximate to the criteria for these illnesses.

There is a further body of evidence that makes it likely that many of our chronic psychotic patients are in actual fact hysterical rather than anything else. As originally conceived by Kraepelin, dementia praecox and hysteria had little in common. Dementia praecox was a chronic disorder characterised by delusions and hallucinations and commonly also by clear organic impairments of cognitive functioning. It occurred more often in males than females. But in 1907, Eugen Bleuler postulated that the fundamental pathology in the disorder involved a splitting of cerebral functions and accordingly he rechristened the disorder schizophrenia. The basis for this splitting according to Bleuler involved a physical loosening of associations. Bearing in mind earlier reflex-associationist models of mental functioning and conceptions of hysteria as involving aberrant reflexes and associations, this new disorder, while looking quite different to hysteria, in severe cases, was conceptually almost identical to it. Added to this was the fact that, if loosening of associations was the basis for schizophrenia, there presumably would have to be milder forms of the disorder, as well as the severe forms that ended up in institutions. How different then would these milder forms look to hysteria?

Is it a coincidence then that the decline in the use of the term hysteria coincided with the introduction of the term schizophrenia? Just as hysteria had at one point subsumed a large part of all psychiatric disorder, by the mid-1950's, especially in the USA, almost all psychiatric patients apparently had schizophrenia and a great number of the general population seemingly had latent forms of the disorder. In part the reason for this was almost certainly the looseness of diagnostic criteria for schizophrenia, as it was conceived by Bleuler. Any splitting between thought, emotion and conduct was liable to lead to suspicions of schizophrenia. The very name implies a splitting of mental functions. Indeed, one popular conception of schizophrenia appears to be of a disorder of multiple personalities, which for Janet in 1907 was an extreme form of hysteria.

There were attempts to resist the expansion of schizophrenia in this way. A number of investigators held out for the concept of a hysterical psychosis. The term schizoaffective psychosis was introduced to cover disorders that did not quite seem like classic schizophrenia and yet were more complex that the usual cases of affective disorder. This term was frequently criticised from a theoretical point of view but was also widely used. What few people realise was that one of the original criteria for a diagnosis of schizoaffective disorder was the occurrence of some precipitating trauma or failure in love. Another difficulty in resisting the expansion of schizophrenia lay in a failure to distinguish between delusional disorders and other psychoses.

In the late 1960s, there was a reaction to the loose use of the term schizophrenia and the number of schizophrenics dropped, particularly in the USA (with a corresponding expansion in the number of affective disorders). But even so, a recent study, in which a rigorous version of Schneider's first rank symptoms were used as diagnostic criteria for schizophrenia, found that only 20% of those now being labelled as schizophrenic meet strict criteria for the illness. If not schizophrenia, what do the other 80% have and what is the cause of their symptoms?

POST-TRAUMATIC STRESS DISORDER

After the Second World War, American views on the traumatic neuroses remained heavily analytic in their orientation and overtly social engineering in their implications. As late as 1975, reviews of traumatic neuroses based on World War II material discussed the issues in terms of simple anxiety reactions occasioned, for example, by the need for the infantryman to keep quiet as he lay in wait for combat, thus inhibiting the natural aggressive responses of posturing and yelling. This could be allayed by the example of courageous generals, who if they led their men vigorously from the front (in the American style), had a lesser incidence of traumatic neuroses among their troops. The troops it seems were often seen as meeting their passive dependency needs by the solidarity of battlefield company, shown by the fact that they often broke down, when it came close to going home, owing, it was claimed, to the potential loss of battlefield solidarity and the imminent need to stand adultly on their own two feet.

While it was recognised that there were still some veterans who appeared to be having difficulty as a result of their war experiences, the problem was supposedly quite small. However there were a number of factors that meant that the traumatic neuroses engendered by World War II were not going to slip readily beneath the carpet. In the first place there were the concentration camp survivors, many of whom being Jews emigrated to the United States. These individuals could not all be dismissed as being disturbed before the event. Many remained disturbed indefinitely afterwards. There were also a number of ongoing wars such as the Korean War and the Arab-Israeli conflict. But above all, there was the Vietnam war.

There were two unusual features to the Vietnam war. One was the extent to which the civilian population were aware of what was going on at the battlefront. The other was the extent to which it was possible to escape from active service by draft dodging, political influence or illness. Military psychiatrists blamed this public awareness doubly. In the first instance because of difficulties it posed to indoctrination. In the second place because not only was there not the unthinking acceptance necessary for indoctrination but also there was a public rejection of what the soldiers were doing. This more than anything else led to an atmosphere in which the difficulties that returning veterans were having were made salient. It led to the official recognition of a post-traumatic stress syndrome.

Furthermore, given that the Vietnam war did not require mass mobilisation, the position of the psychiatrist was quite different. In the previous wars, there was a need to get the soldier back to the frontline. As Grinker and Spiegel put it the job of a psychiatrist was to provide a good relationship in the midst of all that was going on - but a good relationship which involved a return to duty. This was as much a Catch 22 for the psychiatrist as for the soldier. Whereas in civilian life the therapist could avoid advising the patient on what to do, in the second world war they had to take responsibility for "stimulating the patient's motivation, set their goals and direct their sublimations". None of this applied in Vietnam.

This led in 1980 to the establishment of post-traumatic stress disorder as a separate diagnostic category. Although it was mentioned in the introduction, it bears repeating that this was the first time ever that a psychiatric diagnostic system recognised the possible existence of a wholly environmentally determined psychiatric disorder.

Previous editions of the American diagnostic manual (DSM I & DSM II) and the various versions of ICD all had sections for adjustment reactions. But as the term reaction implies, these were not seen as autonomous disorders. If they became chronic the implication was that there must be something else wrong with the individual. Equally, if one had a neurosis (an

autonomous psychological disorder) under these systems, it was implied that there must have been a pre-existent personality or biological abnormality, according to the orientation of the diagnostician.

The essential feature of post-traumatic stress disorder, as defined in DSM III, was the development of symptoms following a psychologically distressing event that lies outside the range of normal experience. The event was not supposed to be just bereavement or a business loss but rather something like involvement in a combat situation, a hostage situation, or some natural disaster. PTSD, however, has rapidly broken through these restrictions.

Of equal importance, however, DSM III goes on to describe the disorder in terms of the experiences of the sufferer. These typically involve a subsequent **re-experiencing of the traumatic event, in the form of recurrent, intrusive recollections or dreams and nightmares or absences (dissociations) in which the event may be relived to the extent of the person acting as though they are once again present at the scene. Recurrent waves of emotion often precede overt recollection or may occur independently. There is usually an avoidance of stimuli associated with the event, which may even amount to an apparent amnesia for the occurrence of a trauma. Intense distress may be experienced, when reminders such as anniversaries are unavoidable or on exposure to events or objects that may symbolise some aspect of the traumatic experience**.

Aside from the recognition that a disorder might be environmentally precipitated, this simple description of the disorder in terms of the experiences of the sufferer and especially the references to recurrent intrusive imagery and waves of emotions is almost unique in the psychiatric literature. Not since Freud in 1895 had psychological problems been described in this way.

DSM III goes on to note that very frequently subjects take to alcohol or drugs to blot out awareness of the distressing events. There is a concomitant increase in arousal, shown in a liability to be easily startled. Subjects may also find it difficult to get asleep or to stay asleep. Commonly there are difficulties concentrating and increases in irritability. Along side this there is a psychic numbing - a feeling of being detached from or removed from others.

The recognition of post-Vietnam PTSD has led also to an awareness of the enduring reactions of many second world war soldiers, which in the absence of an appropriate framework had been all but invisible. It also became clear that many of the descriptions of the veterans of previous wars mapped readily onto the new criteria - such as intrusive nightmares and the occurrence of episodes of dissociation and the experience of reliving rather than just remembering past events.

Rape Trauma Syndrome

But if a trauma can in principle cause a relatively long-lasting disorder in normal people, perhaps traumata less severe than the Holocaust or natural disasters such as earthquakes may also do so. At no point are criteria spelt out as to the severity needed to induce disorder in normal people. It is now accepted that rape is a potential precipitant. The term rape trauma syndrome was coined by Burgess and Holmstrom in 1974.

A good deal of work has now been done on this condition. In the course of a rape, a variety of dissociative phenomena occur. In particular derealisation "this is not happening", along with

depersonalisation "this is not happening to me". Immediately afterwards there may be amnesia for the event. In the course of a rape there is also a submissive quasi-paralysis. This play dead reaction is a prewired autonomic response to stress, which leads, for example, a mouse to hang limply when a cat picks it up by the neck and to remain apparently dead when then deposited on the ground by the cat prior to playing with it. Submission, however, in the case of rape is invariably interpreted by the rapist as acquiescence - and sometimes it would appear by the judge at a later trial. It may even be seen this way by the woman subsequently, who wonders why she put up no struggle, leading her to blame herself for this or to wonder if she secretly did acquiesce.

Another feature of rape is that the victim may become very "loving" toward their tormentor and very grateful when finally set free. This is a pattern of behaviour also found in hostage situations. It would appear to stem from the ambiguity inherent in the oppressor being at the same time the only means of liberation.

There are marked similarities between the post rape syndrome and the PTSD of war veterans. Victims in particular relive the rape in flashbacks. Those awakened from sleep by the rapist, may end up waking most nights close to the time of the event. A variety of physical symptoms set in including headaches, insomnia or sleep with nightmares, appetite problems, startle reactions. Subjects often become afraid to go to various places on their own. They may change phone number, move house or generally attempt to put as much distance between them and the event as they can. They may begin drinking or taking drugs.

Burgess and Holmstrom contend that rape does not bring about rape trauma syndrome by virtue of the sexual act involved so much as because of violence. A common finding post-rape was a distrust of everything, even of formerly safe places, people or occupations. As though the world had turned hostile. This is noteworthy in the light of Freudian claims for a sexual basis for all neuroses.

In addition to the support for PTSD that has come from rape trauma syndrome, a variety of natural (earthquakes) and man-made (bombings and hijackings) disasters in recent years have led many psychiatrists to become convinced of the reality of the disorder. This in turn has led to the growth of disaster medicine and to the recognition that PTSD can occur after less than overwhelming adversity. This would seem to be a conclusion that must be drawn from studies in which disaster counsellors exposed to the survivors of disasters, themselves may develop PTSD symptomatology, even though not exposed to any personal risk.

Neurosis or Malingering?

The nineteenth century view that there must be a real physical pathology in trauma cases to cause the clinical picture, or else that people were dissimulating to gain a reward remained the position until the mid-1980s. The study most cited in favour of this position was carried out by Miller in 1960, who found that 90% of his sample went back to work once a court case had settled their financial compensation. Despite the fact that this study became the odd one out of an increasingly large number of studies, its findings were appealed to as orthodox until the mid-1980s. There were considerable financial and insurance implications riding on any reversal of the orthodox view.

The majority of studies, in contrast to Miller's, indicate that if subjects with disabilities for which no organic cause can be found have not gone back to work before their court case, they are

unlikely to go back afterwards. This is the case whether they receive large amounts of compensation, small amounts or no compensation at all. It also appears to be the case that poor outcomes do not stem from any prior personality abnormality, do not correlate with previous poor work records, and do not depend on any family abnormality.

There has, however, quite recently been a dramatic sea-change in these matters. In 1976, the US Supreme Court ruled for the first time that a disaster could cause a psychological disorder that should be compensable. This followed the Buffalo Creek disaster, in which a dam broke and flooded 1,200 homes. Over and above the compensation paid for loss of life, property and personal injuries, the court ruled that the event had left a significant number of survivors psychologically disturbed and that the Tennessee Water Authority had to compensate them.

The comparable benchmark disaster in Britain was the Herald of Free Enterprise sinking in 1988 - although compensation had been paid for "nervous shock" as early as 1970. In a later ruling on the Hillsborough disaster, the courts decided that an individual may be financially compensable for PTSD even without being present at a disaster - if they had watched disaster befall their relatives on television.

The significance of these decisions is twofold. One is that the psychological disorder in question, being a matter of intrusive thoughts and disturbance of emotions, is diagnosed on the basis of the self-reports of those affected. The other is that for the first time, the courts recognised that an autonomous psychological disorder can be precipitated entirely by environmental factors.

SEDUCTION & HYSTERIA

In the late 1950's, 100 years after Tardieu's reporting of the physical and sexual abuse of children, the problem resurfaced, through the work of Kempe and colleagues in the USA. Much of the impetus for this work came from X-rays of injured children. These showed, in the case of some children, the presence of multiple other healed fractures or deformities, that were not suspected at the time of initial clinical presentation. It took several years for the issue to be taken seriously. It also took, as it so often seems to do, the coining of an apposite title for the syndrome - the battered baby syndrome.

As with Tardieu, the initial descriptions of the syndrome were predominantly in terms of physical injuries. The children, if referred to at all, were said to be quiet, timid, miserable or sullen. What might have been going through their minds was nowhere discussed.

As in the 1860's the issue developed and investigators became aware of sexual abuse as well as physical abuse and that the sexual assaults were most likely to come from relatives, especially from fathers. The occurrence of incest was rediscovered. An incredulous scientific and lay community have since watched while the estimates for the frequency of both physical abuse and incest have soared. In Britain the problem was highlighted by the Cleveland sexual abuse controversy. But arguably the United States is even more concerned with the problem and concern there has resulted in extensive support networks for recent and former victims of sexual abuse and an intensive effort to raise public consciousness on the issues.

As in the late 19th century, the possible occurrence of abuse preceded any recognition that it might have serious psychological after-effects. As late as 1975, in the Comprehensive Textbook of Psychiatry, there was no discussion of the inner mental states of abused children.

In this huge 2,707 page book written by the most eminent American psychiatrists, there is no serious treatment of this issue. The section on child-battering discusses the mental state of the parent, who batters, with the blame being put on the mother and the rising number of cases were put down to the rising level of violence in society generally. In the section on incest, it is noted there is little agreement father-daughter relationships cause serious psychopathology. It is presumed this is because "the liason satisfies instinctual drives in a setting where the mutual alliance with an omnipotent adult condones the transgression".

It has only recently become clear that this is not the whole story. Increasingly the after-effects of child abuse have been formulated in terms of a post-traumatic stress disorder, with the added complication of interference with a developmental process. Abused children, it seems, are afterwards subject to intrusive flashbacks and to waves of emotions without apparent cause. They become nervous, withdrawn and generally less trusting of their environment. In later life there is a higher incidence of depressive disorders, as well as drug and alcohol abuse. There is also an increased incidence of suicide attempts, self-mutilating behaviour and of further episodes of victimisation.

Furthermore, as mentioned in the last chapter, multiple personality disorder is thought to commonly originate in childhood assaults. The diagnosis of multiple personality disorder is at present largely confined to America. But in addition to the core criteria necessary for a diagnosis of multiple personality disorder, there are a number of accessory criteria, the presence of which make the diagnosis more likely. These consist of third person auditory hallucinations, absences, headaches, nightmares, depersonalisation, derealisation and a generalised misery. Subjects presenting with such symptoms in Britain, where specific enquiries about childhood abuse have are not routinely undertaken at psychiatric clinics, would be likely to be diagnosed as either having depression or schizophrenia.

Borderline Syndromes

Another syndrome recently legitimated by DSM III is pertinent here is borderline personality disorder. This is characterised by a pattern of unstable and intense interpersonal relationships, impulsiveness, recurrent self-mutilation or attempted suicide, frantic efforts to avoid real or imagined abandonment and marked and persistent identity disturbance and a generalised sense of boredom and emptiness. Overlaid on this may be transient "psychotic" disturbances.

This is many peoples' picture of an hysteric. It fits with a number of Janet's descriptions. It also fits a description of hysteria by Sydenham from 1681:

> *the very slightest word of hope creates anger...They have melancholy forebodings. They brood over trifles, cherishing them in their unquiet bosoms. Fear, anger, jealousy, suspicion and the worst passions of the mind arise without cause... there is no moderation. All is caprice.They love without measure those whom they will soon hate.*

This disorder entered DSM III in 1980 but its parentage differed to that of MPD and PTSD. Borderline conditions began life as borderline schizophrenia or pseudo-neurotic schizophrenia - a mild form of the disorder, in which there was loosening of associations and episodic "psychotic" behaviour but not the chronic deterioration or first rank symptoms typical of schizophrenia.

These conditions were then taken over by Kernberg and the object relations school of analysis in the mid-1970s. This post-Freudian school, whose leading lights have included Melanie

Klein, Winnicott, Fairbarn, Kernberg and Kohut have in common a downplaying of the importance of instinctual drives and an emphasis on the differentiation of self from others. The borderline conditions, in which such differentiation is poor, were their flagship.

In a supreme historical irony, however, it now appears from recent research that up to 80% of subjects with a diagnosis of borderline personality disorder have been the victims of seduction or assault in their past. In one sense this should be good news for object relations theorists. However, while trying to reconstruct Freudian theory from within, they have never shown any interest in going back to 1895 to start again. Their contention has been that the basis for all subsequent psychological difficulties is laid down during the primary relationship between mother and infant. Such a view does not encourage a focus on the nature of any subsequent environmental traumata.

The unfolding of events here has been instructive. With increased interest in trauma, a number of studies were undertaken of the incidence of childhood trauma in chronic psychiatric disorders, especially schizophrenia. The results revealed that of a sample of women diagnosed as having "schizophrenia" half were liable to have been victims of childhood sexual assaults. Bearing in mind that multiple personalities usually only emerge with the help of a therapist, or that one has to be dynamically oriented to even suspect the existence of borderline pathology and bearing in mind that typically less than half of those diagnosed as having schizophrenia, actually meet strict criteria for the illness, do all these patients have schizophrenia ?

The answer would appear to be almost certainly not. If criteria for borderline personality are applied to the same samples, 80 % and more of subjects who meet these criteria are liable to have been abused.

Aside from the production of non-specific psychoses, borderline states, MPD and post-traumatic neuroses, sexual abuse during childhood leads to an increased incidence of physical symptoms in later life. In a study of a group of patients with confirmed sexual abuse in childhood, Arnold, Rogers and Cook found their patients had a mean of eighteen non-psychiatric consultant appointments and eight operations each. In these latter there was a two thirds rate of normal findings in tissue removed at operation. This level of morbidity had not however led to enquiries about emotional difficulties or past histories of abuse.

The Hazards of Interpretation

A central issue thrown up by the discovery of widespread physical and sexual abuse is the need to establish the truth of what has happened. There has been concern about the validity of children’s statements, which has led to an effort to find some independent marker. In physical abuse, X-rays will often do this. In sexual abuse, this concern led in Cleveland to what seems to have been excessive reliance on the anal dilatation reflex. But where it has been possible to confirm children's statements, it seems that their claims are right in over 80% of cases. The likelihood of fabrication seems to increase when there are concomitant factors such as divorce and custody proceedings.

There have been attempts to devise a method that would allow a decision to be made on the weight to be put on the child's statement. These attempts involve content analysis of the structure, details and consistency of the statement. There have been claims by a number of researchers that such analyses do sift out true from false statements. Whether these claims can be accepted or not is uncertain.

In the first place the amount of detail given by the child seems to depend on how experienced the interviewer is. Paradoxically it appears that the naive and not the experienced interviewer gets more detail. This appears to be because the child acts as though given a licence to embroider, when with a naive interviewer. The amount of detail given to a male as opposed to a female interviewer may differ. Whether the child is with its mother influences the story offered. The current emotional state influences it, as does the probable emotional state at the time of the abuse. Whether the story has been told before affects the way it will be told on subsequent occasions. The expectations of the interviewer, and any leads they provide, will all too often colour the account as epidemics of satanic abuse clearly indicate.

This is what would be expected if remembering is seen as a purposeful act, a creation, rather than just a neutral reading from some tablets of stone. The purpose, as in any action, is to some extent determined by the situation, in which the subject finds themselves. Telling the story at all, however, affects it forever - in much the way that going into the local corner shop more than once affects our memory of the shop. The more we shop there, the more our memory of shopping there will be a composite of the many times we have been there and the more difficult it will be to remember any one episode of being there. Similarly, after a traumatic interview for a job, we replay the scene and dialogue in our minds repeatedly afterwards, touching up bits as we go on an if-only-I'd-said-this basis. This can get to the point, where it becomes difficult if not impossible to remember what actually was said.

Applying all these factors to the question of establishing what happened in situations of possible abuse leads us to expect that even if the abuse did happen, the child's story is likely to be inconsistent and contradictory. This follows as the truth of the matter is in a sense as much a fabrication as any possible other version of events. This will apply even to those cases in which subjects appear to be reliving events rather than just remembering them. Indeed, the wealth of concrete detail that some subjects provide may seriously mislead the unwary. Interpretation will therefore inevitably remain a hazardous enterprise. It is ever a matter of establishing a probable account of what happened rather than supposedly scientifically "proving" a point.

The example of subjects who claim to have photographic memories brings out the issues well. When asked to remember a piece of text or the details of a picture, such subjects report clearly seeing an image of the page in their mind's eye. However, if it is suggested to them that some details of their memory are wrong, the image in their mind's eye changes accordingly. Freud was prone to illustrating the validity of his contentions with etymological examples, in which the word for some action for example could be shown to have a sexual origin. Borrowing a leaf from his book, we can note that even photographic memory involves a potentially hazardous re-cognition of what happened rather than just a simple reseeing.

To add to the hazards of interpretation, a surprising finding has been that sexual abuse sexualises. Far from being sexually inhibited, children who have been sexually abused often become forward and sometimes quite shocking in their language and behaviour. They play seduction with interviewers. This seems to be part of the general process of re-enacting or reliving that happens after trauma. A similar phenomenon occurs in children exposed to violence, who become aggressive and assaultive toward their peers. These effects wear away if the child is able to recover for some months in a supportive environment.

Such effects would, however, give some grounds (mistaken) for believing that the child rather than the adult was responsible for the abuse. Freud and his contemporaries can perhaps be forgiven for wondering if some degenerative mechanism of some sort must not be operating to produce such perversity so young.

THE ENVIRONMENTAL PRECIPITATION OF NEUROSIS

A great deal of recent research supports the contention that trauma may precipitate neuroses. Some reviewers have noted the similarity of the emerging picture to Janet's original formulations. Surely, however, these events are not so common that they could account for the creation of all neuroses and if not are the remaining neuroses the result of some degeneracy?

A central aspect of the studies reviewed above suggests otherwise. It would appear to be the act of violence rather than the specifically sexual nature of seductions that leads to subsequent problems. This has become clear from studies which have shown very similar outcomes in children subjected to physical violence alone, without sexual abuse. It has also been found that being the witness of violence may be as damaging as being its direct victim. Thus children who witness assaults on their parents by burglars or murderers or who are exposed to the physical maltreatment of a mother by a father also show PTSD, a tendency to the development of borderline syndromes and Briquet's syndrome. Given this, it becomes much more plausible to suggest that a very large number of neuroses are environmentally determined.

At the time of writing, the findings of a British survey have just been published in which it has been claimed that up to 1 in 4 women have been raped at some point in their lives - most often by husbands or boyfriends. This replicates an earlier American study, which contained other disturbing findings. One was that women raped by men they know are not the victims of some quasi-crime. Such women are more likely to be significantly injured in the rape than are women raped by a stranger. Raped women are eleven times more likely to be depressed in later life than women who have not been raped, seven times more likely to have a social phobia and three times more likely to have an obsessive-compulsive disorder.

At this point, I have to interject a confession. Influenced by an orthodox psychiatric training, I like many of my colleagues have not until recently systematically asked for a history of possible childhood trauma. Where such trauma has come to light against a background of manic-depression or a supposed schizophrenia, I, and I am sure others, have been liable to regard it as unfortunate but to dismiss it as coincidentally occurring in a disorder that was constitutionally determined. But in taking histories now in the light of the emerging findings on trauma, and indeed on thinking back on individuals I have treated - particularly the ones who have failed to respond to the antidepressants or antipsychotics they were prescribed, I am all too aware of traumas that I have noted but not acted on before. However, far from finding a high incidence of sexual abuse or a history of physical assaults, it has seemed to me that an equally large number of subjects, who have dissociative or borderline symptoms, have been the witnesses of abuse or have been mentally tortured. Particularly common has been stories of children being locked in bedrooms or in either cloakrooms or outhouses. Sometimes for 2 or 3 days. Sometimes left in their own urine, faeces or vomit. Sometimes to be faced in later life with a parent who is pleased with themselves for never having hit their child.

However, there is a further question that anyone who is committed to an environmental point of view must answer. Why, if the disorder is environmentally precipitated, does it become as chronic as Briquet's syndrome, MPD and the borderline disorders appear to be? Current

research suggests that the after-effects of trauma depend to some extent on the level of support available to the child. An unknown proportion of sexually abused children for example, who attempt to approach their mothers for support are confronted by a mother who has herself been assaulted in the past. The response to the child in these circumstances is often quite negative and may even involve the spectacle of the mother breaking down, which compounds the situation facing the child.

Dissociation and Repression

The core pathology of PTSD cannot be one of banishing traumatic memories to some unconscious to be kept there by defences, as Freud claimed. It must involve a dissociation of some sort - a lying outside of focused awareness. This will happen if the traumas that precipitate PTSD and the borderline disorders cannot be interpreted in terms of events that can be integrated adequately into a working model of the self.

Patients with borderline disorders, however, provide some interesting clues to something else that goes on in these states. If asked why they slash their wrists or attempt suicide, they often say that they do so to get some release or to defend against something worse happening - about which they are often uncertain.

The following case may perhaps make clear both the kinds of torture that may give rise to borderline disorders and what is involved in episodes of self-mutilation. To preserve anonymity and in recognition of Emma Eckstein, I will call the individual concerned Emma. I first saw Emma after she had had several overdoses. The antidepressants and neuroleptics she had been prescribed in the past had done little good. I saw her for a few sessions in which I tried to do what Freud had been doing in 1895 - getting the person to call up images to their mind's eye. Toward the end of one session, the phone rang in the office and I answered it. While talking, Emma proceeded to break the office up.

In early puberty, when the girls at school began to talk about developing pubic hair and breasts, Emma became aware that she had had pubic hair for years and did not seem to be developing breasts. She later began to produce facial hair and to spend hours each day plucking it - in the end she was spending hours doing so. Afraid of men, she spent time with women and was referred to a psychiatrist because of her sexual orientation. He was of no help. The situation dragged on for years, until in her late 20's she was diagnosed as having a minor biochemical abnormality in the production of sex hormones, which can be readily treated.

During the session in my office, Emma had revisualized an episode that had taken place in the school swimming pool. The boys had their hour first and then they filed out past the waiting girls. On one such occasion, they noticed, or it seemed to Emma they noticed, her lack of breasts and prominent mons veneris and began sniggering. It was this scene she was "in" when the phone rang in my office, with all its concomitant rage. Later when "out" of this state, she said that her previous overdoses had all been taken to bring to an end a train of comparable intrusive images or to a sense of rising foreboding. This appears true of many self-harming episodes of individuals with borderline disorders - many other examples can be found in Jermone Kroll's authoritative book on the condition.

The significant point here is Emma's behaviour and the behaviour of many other individuals in comparable situations involves a very conscious attempt to "repress". Such repression is for the most part within awareness. This is quite different to the Freudian notion of defensive

repression, which not only supposedly acts to keep things out of awareness but is also itself out of awareness. Freud inferred the existence of such a repressive mechanism indirectly from what patients said. The individuals themselves did not have direct access to the phenomenon.

In favour of their having direct access is the fact that we all purposefully and consciously repress certain impulses or defend against shameful or painful memories. This is usually quite successful - and there is no evidence that it is not also healthy. But, it seems that in the case of the borderline disorders or post-traumatic stress disorder, this form of defence may not succeed. Presumably the trauma involved has stretched the natural limits of adaptability.

7 PROJECT for a SCIENTIFIC PSYCHOLOGY

The notion that environmental stress may precipitate a psychological disorder developed slowly. As the idea is relatively simple and even intuitively obvious, this must mean that the failure of the idea to take hold indicates there are other factors at play. In the case of the post-traumatic stress disorders and the impact that such a notion may have on the interests of a nation at war, what is at stake seems clear cut and easily understood. Once the question of childhood trauma and the role it might play in the later development of psychological difficulties is raised, the picture begins to cloud over.

Around 1880, when this narrative opened, hysteria encompassed all the neuroses. Are the lessons suggested by post-traumatic stress disorder applicable to the other neuroses, which from 1880 onwards began to crystallise out of the body of hysteria? What about obsessive-compulsive disorder or agoraphobia? The issues begin to develop in complexity when it comes to applying what we have learnt to the other neuroses. For instance, some still say there is only one general neurotic condition but DSM III notes up to nine different neuroses, without including for example alcoholism and other substance dependent states. Is alcoholism a psychological problem? Does the difficulty in deciding this or deciding on the number of the neuroses, have anything to do with the issue of environmental precipitation of the neuroses in general and the legal and financial implications this might have?

Even where hysteria is concerned, the issues are more complex than may seem apparent. If post-traumatic stress disorder, multiple personality disorder and the borderline disorders are caused by trauma, why do these conditions not respond relatively straight-forwardly to a psychotherapy aimed at establishing what actually happened?

At stake here is an issue larger than just the question of the individual neuroses. At stake is the nature of the psyche and of psychotherapy. I have noted the recent switch in focus from the dynamic unconscious to consciousness. Consciousness is radically social in a way that the unconscious or the nervous reflexes of behaviourism are not. But what is consciousness? How do events enter consciousness? How does consciousness interact with its subconscious or unconscious substrates?

At stake also is the traditional view of mental illness. While post-traumatic stress disorders may be relatively rare, it is conceded that they may be severe. These are not mild disorders. This runs counter to the orthodox view that the neuroses are a set of mild disorders and as a consequence are of no great strategic importance in the battles for possession of the mental illnesses. How many other severe clinical conditions are essentially neurotic rather than psychotic?

Taking up these issues makes it clear that the ramifications of the APA's formulation of the concept of post-traumatic stress disorder extend far beyond the questions of legal rights or financial compensation for the victims of trauma.

THE DEMISE OF BEHAVIOURISM

There is no easy way to avoid complexity at this point. The best option seems to be to go in at the deep end with some of the puzzling kind of observations that led to the overthrow of behaviourism. Behaviourism emerged as a major model of mental functioning from the mid-1930s onwards. It rose to a position of dominance by gaining control of the strategic ground of

physiological plausibility. Its simple model of the mind in terms of reflex functioning had no more psychology than physiologists could understand and not enough physiology to confuse psychologists. For a theory that put so much store on being physiologically appropriate, behaviourism paid remarkably little heed to the brain.

This oversight was raised from the start by Karl Lashley. According to behaviourists, all behaviour must be constituted by sets of stimuli and their reflex or associated responses. It was assumed that these reflexes must be stored in the cortex. One of the reasons, therefore, that man's behaviour was more complex than that of animals might be simply a case of his having more storage space. But Lashley found himself unable to cause animals to lose the skills, they had acquired in behavioural experiments, by removing sections of their cortex.

Attempting to replicate Lashley's findings some years later, David Oakley and colleagues put normal and decorticate rats through a range of problem-solving tasks. There was no difference between the groups on tasks that only required the ability to acquire habits - indeed the decorticate rats were if anything better at these. But where the solutions required an ability to generate or refer to an "internal map" rats with a cortex did clearly better.

Similar findings began to emerge from a number of laboratories in the late 70s. Richard Hirsh proposed that the implication was that rats (and humans) can acquire both habits and memories and that these are stored separately. Habits, he argued, are the result of classical behaviourist learning. Memories are something I can recall to mind - a model. In the case of memory, I can resee what has happened in my mind's eye.

Work on the phenomenon of blindsight by Weiskrantz, Humphrey and others sheds further light on the implications of the distinction drawn by Hirsh. Blindness can result from disorders within the eye or the nerve running from the eye to the occipital cortex or it can result from disturbances to the cortex itself. Subjects with cortical blindness experience themselves as blind. But when placed in front of objects they claim to be unable to see, they nevertheless manage to locate them and pick them up much more often than other subjects who are blind. Typically, they account for their apparent blindsight by saying that they can "sense" objects in front of them.

This makes sense because it is known that some visual processing goes on in relay stations along the optic nerve before it reaches the cortex. For example, we often blink to keep something out of our eyes before we have ever a chance to "see" it. It now appears that subcortical systems manage such reflex reactions while cortical visual systems do the "seeing" and that this seeing involves building up images or models of the environment.

Memories are to habits as seeing is to sensing. They appear to involve the constructing of models, the complexity and detail of which depend on the requirements of the task in hand. These models can usually be visualised. Remembering typically involves a reseeing in one's mind's eye. This point can be illustrated by a feature of Alzheimer's dementia. This cortical dementia leads in its early stages to a loss of memory but not to a loss of the ability to acquire habits. When introduced to me, a patient with Alzheimer's will typically not be able to remember my name two minutes later. They may not even remember me introducing myself, even though I may have done so on several occasions. But if I then show a list of names and ask them to pick out mine, they will often plump for the right one, with an uncertain question "could it be David Healy?". What seems to be happening is that the repetition of my name has

primed them to picking it out from a pool of other strange names, even though they cannot replay in their mind's eye a scene in which I introduced myself to them.

A French physician, de Claperede, made similar observations on patients with Korsakoff's psychosis, an alcohol induced amnesia. De Claparede introduced himself to a woman with Korsakoff's one day by shaking hands with a pin in his hand. The next day she refused to shake hands but could give no reason for her reluctance. In general, even though patients with Korsakoff's cannot remember, they can learn new skills even though they will never remember how or when or where they learnt them. They cannot resee in their mind's eye the time and place of learning.

Alzheimer's disease also brings out the close links between perception and memory. For example, when shown the letters of the alphabet in figure 1, subjects with Alzheimer's will typically be unable to make them out. The point here is that if they are unable to perceive correctly quite simple shapes on a piece of paper, it is not so surprising that a kind of memory that involves a reseeing in the mind's eye should also be failing.

Such findings, which appear to demand the existence of internal maps or images return us to the position that Tolman found himself in in the 1930's, before he was swept away by the tide of behaviourism. Now, the tide is running the other way. This is due principally to the advent of computer modelling of mental processes, which began in the 1950s. One might have expected that such a radically unconscious automaton, as a computer, would once and for all have permitted the scientific analysis of behaviour without recourse to mental imagery. Ironically, however, computers have indicated how psychological functions might operate through the genesis of models and images and in so doing have provided a "neurobiological" rationale for the further exploration of consciousness.

At roughly the same time as computers came into psychology there was also a set of significant developments in the neurobiology of the subcortical areas of the brain - the seat of habits. As will become clear, far from being a simple reflex system or some unitary psychoanalytic Id, current findings suggest that these brain areas comprise a multi-system structure, the various parts of which operate in different ways.

THE ANATOMY OF THE UNCONSCIOUS

As early as the 18th century, Winslow had observed that there was a network of ganglia, running alongside the spinal column, from which nerves ran to the heart, lungs, gut and genito-urinary organs. This he termed the sympathetic nervous system. Another complementary system was subsequently identified and called the parasympathetic nervous system. In 1898, James Langley suggested that the sympathetic and parasympathetic systems formed part of an autonomic nervous system - so-called because of the relative autonomy, or involuntary nature of its functioning. In contrast to the voluntary nervous system, which arises from the cerebral hemispheres and whose destruction in a stroke causes paralysis, the cerebral hemispheres can be removed entirely without affecting the functioning of the autonomic nervous system.

By 1840, the nervous system was well on its way to being seen as a mechanical system, driven by electrical activity. In 1904, Elliott in Cambridge suggested that the sympathetic system acted by releasing chemical neurotransmitters. He was ignored as the idea had too much the suggestion of a resurrection of animal spirits. But his work was confirmed by Walter Cannon in the 1920s, who showed that the stimulation of sympathetic nerves led to the release of a hormone that had previously been identified in the adrenal gland - adrenaline. This raised heart rate and blood pressure, leading Cannon to suggest that the sympathetic nerves and the adrenal glands acted as a system, that was mobilised in response to stresses - whether pain, loss of blood or the sight of a threatening situation. Its mobilisation put the organism on an action footing, in preparation as he put it for fight or flight. He proposed that the sympathetic system was central to fear and anxiety.

Vigilance

Cannon's proposal involved the peripheral nervous system. Until 1960, no one appears to have believed that the animal spirits of chemical neurotransmission might have a role in the central nervous system. In 1954 Marthe Vogt discovered noradrenaline in brain cells. In 1964 it was

shown that noradrenaline- containing neurones formed a system, which had its roots in some of the oldest areas of the brain. It is central to vital functions such as breathing, cardiac activity and arousal. As the cells which contain noradrenaline stain blue the "nucleus" of noradrenaline containing cells came to be known as the **locus coeruleus** (LC).

Current views are that the LC comprises part of a vigilance system involved in sensory biasing and feature extraction. When novel or fearful things appear in the environment, this system switches on and orients an animal to what is going on. Orientation involves a heightening of figure-ground discrimination. This improves progressively with arousal up to a threshold, at which point hyperarousal leads to a fall-off in discrimination. As figure-ground discrimination occurs subcortically, it is unaffected in blindsight and it is this that permits simple shape localisation and discrimination and general orientation.

Those of us who still have our cortices intact can get some idea of what is involved by considering those senses that do not involve cortical modelling - when the threat comes from within. As anyone, who has had a distended bladder or colon can testify, what happens is that one becomes aware of there being something not quite right. This awareness will help pinpoint which organ is involved but only in a very gross sense. When there is an inflammation of the large bowel or an obstruction of the small bowel, the system will pick out the relevant organ from the ground of other viscera but it does not localise the problem accurately within one organ.

An example may indicate a role for the vigilance system in the startle reactions of PTSD. I recently saw a woman in her mid-twenties, who had been referred for anxiety. It transpired that she had been married for several years to a man who regularly beat her up to the point of knocking her unconscious. She had miscarried on several occasions, once after being pushed down the stairs. She left him and started a new life, one aspect of which involved joining a climbing club. One day out climbing, she got stuck in a gully. The climber ahead of her extended a hand back to help and she panicked. Almost certainly because her vigilance system was primed to register as a serious threat the figure of a male hand coming toward her, especially against a background of increased anxiety in the first instance.

Recent work by Svensson in Stockholm suggests that the LC is more responsive to internal threats than external ones. It had long been known that the sympathetic system responds to pain, lowering of blood pressure or loss of blood, nevertheless there has been almost exclusive interest in the role it plays in adapting to external difficulties. While investigating LC function, the Swedish group found that even the modest changes in blood pressure and volume that followed on changing posture were sufficient to activate the locus. Full bladders and distended colons clearly inhibited an animal’s orienting response in a novel environment, indicating that the LC may even be biased toward internal threats.

This might seem to favour the psychoanalytic contention that the return of repressed endogenous material is of greater importance to anxiety levels than environmental factors. However, the reality of what is involved seems more prosaic as two examples may indicate. It is frequently found that some elderly subjects who become confused or delirious have a urinary tract infection or severe constipation. In these cases, activation of the LC against a background of diminished processing resources leads to something like the effects of extreme anxiety - confusion and disorientation. Using 1890's terminology, this gives us an actual neurosis. (Something similar happens in alcohol withdrawal).

The other example concerns low grade illnesses. These tend to make people edgy and irritable for probably very similar reasons. It is common to find that tension or sleeplessness precedes the onset of a viral infection. It is also known that many people who have silent cancers are vaguely aware that there is something wrong with them often for considerable lengths of time before diagnosis. It pays, therefore, to take some heed of bodily intimations. The traditional psychiatric response however to patients who insist that there is something physically wrong with them in the case of depression for instance is not to applaud their insight but to label them "psycho"-neurotic and to accuse them of somatisation.

Tolerance

When our cortices are intact and the threat is external, being vigilant involves targeting the full battery of cortical processing resources in a particular direction. It is experienced in terms of heightened awareness. But it can only happen in the presence of tolerance to everything else in the environment. Tolerance is what happens when you live on a busy street or beside a train line apparently without hearing the noise after the first few days. It may only be if a particularly large truck roars past the front window or the noise stops that you become aware again.

Something that happened me recently may illustrate an important point about both tolerance and vigilance. One of the casement windows in the bedroom where I was sleeping began to creak. It could be heard clearly while lying in bed at night. Over the course of a few weeks far from becoming tolerant to it, the noise became more and more prominent. Why? Well the house in which I was living was an old one, which looked like earning me a modest amount of money when it was sold. I had a private fear, however, that it was going to fall down. Cracks had begun to appear in the plaster. And the house next door had had to have piles driven into its foundations to counteract subsidence. Given this, the creaks could have been the result of shifts in the structure of the house rather than just a consequence of ill-fitting windows. When I finally got round to inspecting the window, something I put off not wanting to know the worst, it turned out that it was strictly a window problem and not a house problem that was causing the noise. Almost immediately afterwards I stopped hearing the noise.

This indicates that the issue involved in tolerance is one of survival. Organisms pay heed to novel events until they have assessed the threat that such events pose. When they are judged to be harmless, less heed is paid to them. If it remains uncertain what is going on, attention is maintained. The event however that is being reacted to is rarely something simple and of absolute salience. Rather as in the case of my creaking window, the situation in which this noise was occurring was constituted by a large number of personal circumstances, which involved issues of survival. Similarly in the wild, animals faced with novel sounds, sights or smells react not just to those stimuli but to an entire environment. This is not simply a matter of deciding whether the beast that makes that strange noise is dangerous or not but rather whether the environment in which such beasts occur a safe one. Or alternatively, I thought I knew what was going on around here, but it seems that I don't.

This is also the case with alcohol and drugs. Like loud noises or visual events, they bring about change in the internal milieu. While the change is novel and its significance uncertain, we react sensitively to it. If repeated administration proves harmless enough, reactions will be blunted. Thus, drinking in one single environment at one point of the day - one's local in the evening - can lead to the development of an ability to handle quite large amounts of alcohol without

becoming inordinately disco-ordinated or slurred of speech. However, having a drink (or a fix) over a business lunch or in the morning may go to one's head much quicker.

The targeting of resources that can be brought about may be precise to the point of permitting vigilance to what is happening in one field of vision while being tolerant to what happens in the other. This we do on looking through a microscope for example. The example of operating a microscope was one that Eliot Slater was wont to offer, in the apparent belief that it indicated the irrelevance of dissociation as a mechanism in the production of neurosis. However, given that the system that enables us to function this way is not under voluntary control, there would appear to be scope for things to go wrong.

Craving

In 1959, the neurotransmitter dopamine was identified in the central nervous system. Cell bodies containing dopamine have since been shown to comprise part of a ventral tegmental system. From this some dopamine neurones run to motor areas of the brain and their loss causes Parkinson's disease. Others run to midbrain and cortical areas and are centrally involved in what is termed incentive learning - the kind of learning that occurs when an animal encounters a **biologically** important stimulus such as food or a potential sexual partner.

In 1954, Olds and Milner discovered that there appeared to be pleasure spots in the brain. Implanting electrodes, through which a rat can give itself an electric current by pressing on a lever, in most brain areas produces nothing of note. In some areas, however, the rats seemed keen on the effects of self-stimulation and in some cases if left to their own devices may self-stimulate to the exclusion of even food and drink. It was quickly proposed that these experiments indicated the existence of pleasure centres in the brain - a possibility that almost certainly would have found favour with both Freud and Skinner. Where earlier behaviourists had argued that behaviour consisted of complex clusters of stimuli and reflex responses, behaviours became established, Skinner argued, because of their rewarding qualities.

The ventral tegmental system seemed closely associated with these pleasure systems. But the picture has become far more complicated. The notion of pleasure centres has been diluted considerably. It now seems that far from there being pleasure **hot spots** in the brain, that there are areas of the brain that respond to familiar signals pleasurably and unfamiliar signals with displeasure. Pleasure seems more a function of the familiarity of the message being relayed through the system that the result of any intrinsic property of the system that is capable of over-riding all other aspects of behaviour.

The operation of this system is now of central interest in the study of the addictions. It used to be argued that the terrors of going through withdrawal were what kept so many people addicted. But if the terror of withdrawal were such a significant factor in producing chronic abuse, it might be expected that once freed from the clutches of the demon drink/drug, anyone with the least bit of wit would keep well clear of further involvement. What perversity or degenerate impulse is it that leads to further abuse?

The customary response to this problem has been to distinguish between physical and psychological dependence. The former leads to clear cut withdrawal symptoms when the drug is stopped but the latter is supposedly a state of mind that is the real problem with the addictions. When asked why they return to their habits, addicts and alcoholics often respond in terms of "cravings". A notion that seems to have the suitable intangibility of a psychological

quality and conveniently seems to suggest a depravity or perversity in keeping with the social opprobrium accorded to addicts. The idea of craving was first introduced in 1878, in the heyday of degeneracy, by Edward Levinstein in a book entitled The Morbid Craving for Morphia.

Current research suggests however that cravings are a physical dependence of another sort. Only some drugs of abuse, such as cocaine, amphetamines, nicotine, alcohol and opiates cause cravings. LSD and the psychedelics do not. It appears that drugs that feed into the brain systems responsible for the generation of and satisfaction of appetites, of which the ventral tegmental system outlined above is a part, are associated with cravings and those that do not affect this system are not.

What appears to be involved is just the opposite to tolerance. This phenomenon has been called behavioural sensitisation. Certain drugs induce it, others do not. Morphine is capable of inducing both sensitisation and tolerance. Animals on morphine develop tolerance to its analgesic effects but sensitisation its appetitive effects. Given the complexities involved, awareness of this developed slowly.

A moment's reflection should indicate that the last thing an appetitive system could do with is tolerance to the sight of food, drink or sex. Rather just the opposite. In contrast to the effect of environmental cues in helping to bring about tolerance because they signal the non-threatening, or insignificant, nature of what is happening, one might expect environmental cues to take on significance where appetite is concerned. That is animals will become increasingly sensitive to aspects of an environment that indicate the possibility of food or sex or drink. Such cues should lead to increased interest.

This seems to be exactly what happens to all of us where our appetites are concerned. Typically, we do not notice the accumulation of environmental prompts pushing us toward the consummation of an appetite, unless we have been removed from the environment artificially for a while. For example, I saw someone recently who had been put on total intravenous nutrition for a bowel complaint and confined to a food free environment. When liberated from this regime, he went down to the hospital foyer and found himself assailed by food. On one side of the foyer was a sweetshop. On another a vegetable and fruit shop. On a third the hospital canteen and snack bar from which the aroma of an imminent mealtime was emanating. On all sides people were munching chocolate bars or eating sandwiches or fruit. These are cues we all take in our stride daily and pay little heed to but which are in reality powerful messages that are priming our appetites silently and which caused my client to flee in distress as he couldn't afford to start eating.

In a similar fashion public houses and the cultures surrounding both drink and drug taking prime an appetite that has been created. This can extend to having one's appetite aroused by the sight of needles. Once stimulated, appetites have a way of grabbing attention. Shakespeare has put this most forcefully in Sonnet 129:

> The expense of spirit in a waste of shame
> Is lust in action; and till action, lust
> Is perjured, murderous, bloody, full of blame,
> Savage, extreme, rude, cruel, not to trust;
> Enjoy'd no sooner but despised straight;
> Past reason hunted; and no sooner had,

Than past reason hated, as a swallowed bait,
On purpose laid to make the taker mad:
Mad in pursuit and in possession so;
Had, having, and in quest to have, extreme;
A bliss in proof, and proved, a very woe;
Before, a joy proposed; behind a dream.

All this the world well knows; yet none knows well
To shun the heaven that leads men to this hell.

It is natural to bend our minds to the satisfaction of our appetites when they require satisfying. As the weight of cues to indulgence build up, we typically come closer and closer to behaving on automatic pilot. We less and less regard alternative cues in the environment. Thus the hacking cough is not registered as we light up a further cigarette, or the little soothing snack, while we worry about our weight, and the children's Christmas presents get forgotten until the drink runs out.

One way to put this is in terms of dissociation. In instances as extreme as these, we seemingly fail to make what others would see as "reasonable" associations. This blocking is something we may have little "insight" on. In severe cases of substance dependence or appetite disorder, the lack of insight, just as with hysteria, may be far greater than in the so-called psychoses, which are supposedly characterised by lack of insight.

PSYCHOANALYSIS, BEHAVIOURISM & THE UNCONSCIOUS

These developments permit a number of points to be made (fn 1). One is that common to the various forms of unconscious learning involved, there is a lack of autobiographical detail. There is no stamp of when, where or why the learning was acquired. Thus, a number of the psychoanalytic criteria for the Id are met by these systems. But it would seem that there is no such thing as a homogenous Id. Rather even the most primitive areas of the brain show considerable structure. These structures do not it would seem relate to each other in any readily characterised hierarchical fashion and none are exclusively concerned with erotic impulses.

The second point is that the operations of these systems seem to be a matter of primings and habituations rather than a question of imagery or symbols. There seem to be no models or representations of any kind in the old brain. Accordingly, it would seem this particular unconscious could not easily function as part of a dynamic unconscious, in the sense required by psychoanalysis.

A third point is that even at this level of the psyche, functions appear to be geared toward anticipating the future rather than defending against the past.

Finally, while ordinarily subcortical and cortical systems appear to work in harmony, there also appears to be the possibility of disjunctions between these systems. When this happens, we may become aware without being conscious of what we are aware of, for example, or we may find that our pursuit of an appetite has involved the suspension of critical judgement. This suggests two things. One is that dissociation is possible. Equally there is potentially more than one form of dissociation.

The Psychobiology of Substance Abuse

Superficially alcoholism and the various substance dependencies with their "oral" qualities might be expected to fit in with the general psychoanalytic theory of stages of psychosexual development. Psychoanalysts after Freud certainly appeared to think so. Sandor Rado, for example, argued it is not alcohol or drugs but the impulse to use them which is the core of the addiction. The craving for pleasure the drug gives supposedly derives from an inability to handle frustration. This would give rise to tense depression but for the intervention of alcohol or drugs. These work not pharmacologically but supposedly by a magical willing of the ego which cathects its problems out on the substance of abuse. Rado argued that this is effectively a form of masturbation.

Robert Knight argued that the alcoholic's personality is characterised by excessive demands for indulgence, which are doomed to frustration in an adult world, leading in turn to rage and hostile acts against those who are thwarting him. The outcome of this is guilt and masochistic self-punishment, leaving the alcoholic in need of affection - and of course indulgence is one sign of affection. As affection becomes progressively less likely, the circle tightens. Knight believed that such behaviours were first laid down by maternal responses to infantile difficulties with oral pacifiers.

Later more object-oriented approaches have put less emphasis on intrapsychic impulse control and more on interpersonal dynamics. Taking this approach, drinking is an incidental pleasure, aimed at bringing about psychological torment and a situation in which the subject will be scolded by authoritative others and will have to beg forgiveness. This game is indulged in as the alcoholic is classically afraid of intimacy and the dynamic of reproach and forgiveness does at least provide for emotionally intense interactions.

Taking a behavioural approach, substance abuse can be seen as classic instances of aberrant habit (reflex) formation. They might then be expected to respond to behavioural interventions. They do not. Various regimes have been tried: reinforcing abstinent behaviour, punishing abuse behaviour, and attempting to set up conditioned reflexes to alcohol. Neither behavioural approaches or the insight oriented psychoanalysis of alcoholic behaviour, however, have had any better success rates than those reported in studies using LSD treatment.

The most obvious thing about these formulations of substance dependence is that they involve the transposition of ideological principles to the problem rather a creative attempt to come to grips with the problem based on the details of the actual experiences of affected subjects. In marked contrast the therapy of substance dependence now aims to map out in detail the situation of the dependent individual and interventions are based on such details.

A second point is that these approaches focus on the internal failings of affected subjects - their degeneracy - despite increasing evidence that the kinds of learning that form the basis of appetitive behaviour are context sensitive and in the face of considerable evidence that substance dependence problems are social creations. Why the environmental inputs to both hysteria and the substance dependence have been ignored is taken up in chapter 10.

THE REDISCOVERY OF THE PSYCHE

I have mentioned the growing distinction between memory and learning. Where habits and the old brain appear to deal in tendencies, propensities and intimations, remembering appears to be a reseeing, a matter of models, images and representations. The question of emotional

images in our mind's eye appears to be a recurring one throughout the book so far. The psychology of these images will be addressed first, and then the question of where such images and emotions might be located.

Imagery

Writing in 1883, Francis Galton, a cousin of Charles Darwin took up the question of mental imagery - visual memory. When he asked a number of his scientific colleagues to call a picture to their mind's eye and describe the details to him, he was sur prised that many of them claimed to be unable to do so. Some dismissed the notion of a mind's eye or even that of an image as merely a figure of speech. He got the opposite reaction from a sample of non-scientists, who were quite amazed that anyone could possibly question the existence of internal imagery. He concluded that we all imagine but that women, children and more primitive peoples are particularly imaginative. Had he included internal monologues or dialogues along with visual imagery, he would most probably have obtained a higher overall incidence of internal events, as recent research suggests that some of us are visually and others verbally or aurally biased.

There are 2 points here. One is that Galton sampled a 100 scientists to establish the range of the experiences people have. The other is that for almost a century despite his study, psychologists have not been prepared to countenance the existence of any such internal events. The idea of treating the matter scientifically has often been ridiculed in terms of ghostly images being flashed up on ghostly mental screens. As it is patently obvious there are no screens in the brain, it has been inferred that imagining must be just something we imagine.

However the notion that one cannot, in principle, be scientific about images because they are not accessible to objective verification only really holds water if one believes that human beings are congenitally mendacious. It is clear there is a difficulty with the idea of being objective about internal inaccessible "subjective" events. But wherein does the objectivity of perception of external events lie? Attempting to draw a scene is one sure way to wonder about the evidence of one's own eyes regarding external events. Anyone who tries, usually finds that what they thought they saw before them was just a working copy, a model of reality. Certainly what gets produced at the end by the artist is no photograph. What about the perceptions we have when confronted with a series of dots or ambiguous smudges and we see shapes in them? Or again the so-called optical illusions, where we see figures that may be interpreted as either of two things - a vase or two faces for example.

Simple examples such as this illustrate that perception seems to involve an internal construction of working models and that my working models are not the same as yours. So "objectivity" isn't just a matter of looking at what's out there - it is something we arrive at by consensus. If so there seems no good reason to believe that one cannot be objective about percepts in the mind's eye. Internal images are perceptual models that are produced by the very same constructive activities of the psyche that go into building the percept’s we use to interpret the outside world. Once constructed they can then be scrutinised on an "internal screen".

Taking just such a naive approach to images - seeing them as models flashed up on internal screens - has led a number of researchers, most notably Roger Shepard and Stephen Kosslyn to model imagining using the image generating capacities of modern computers. The one appears to map onto the other extraordinary well. Such work has allowed detailed predictions

about what will happen, for example, if a subject is asked to imagine an object and then rotate it in various directions or if they are asked to imagine elephants standing beside dogs and then asked to focus on one or other of the two animals. Predictions on questions such as these and many others have been born out time and again by rigorous testing in various laboratories.

On the basis of such data, it can be argued that all perception is actually imagination. We hang onto some images and call them percepts if they are consistent with the further evidence we look for. Others we dismiss as just imagination because no further confirming evidence can be found. This can be illustrated by a thought experiment. Suppose walking through a bedroom, you glimpse a tiger out of the corner of your eye lying in the corner. You can imagine walking out without paying any further heed and then wondering if you imagined what you think you just saw. The tiger is likely to be dismissed as imaginary because of the unlikelihood of a second glance providing confirmatory evidence - unless of course it does.

There is an important implication for the development of our argument that follows from any account of images that casts them as percepts with an internal reference or as the inner aspect of percepts. Percepts don't intrinsically involve symbolic reference. When I see a grain silo, I primarily see a grain silo and not a phallus. I can see a phallus, if I want, but doing so is a matter determined by social conventions rather than by the intrinsic nature of the percept. The symbolic transformation of percepts according to social conventions is not tied to any fundamental biological realities. Thus images of a lamb or a fish may, for Christians, stand for Christ.

As with percepts, therefore, the interpretation of images is in the first instance a matter of getting their constituent details right. They may have symbolic overtones but if they do, these will be relative and set by current social conventions rather than absolute and set by biological realities. Thus dreaming of scarab beetles now will probably refer to fantasies of exploration or of the exotic and will probably happen after seeing a horror movie with not-quite-dead mummies in it, whereas in Egypt 3000 years ago it would have had a significance set by then prevalent mythologies.

From this it follows that the interpretation of the symbolic aspects of an image will be a matter that any reasonably well-informed member of the society the imaginer comes from will be as likely to get right as any other. Spending some time at the interpretative game will tend to improve one's performance, in much the manner that repeatedly doing cryptic crosswords improves one's skill, but practise will not guarantee interpretative accuracy.

Demythologising images, in this manner, should not be thought to imply that they are "simple" entities. In contrast Huxley's analogy of the whistle of a locomotive, they are no more irrelevant to human functioning than percepts themselves. Like percepts they are working models and may be very complex constructions depending on the task being modelled. The capacity to imagine lays the basis for memory, which now appears to involve "re-cognising" the past. It also lays the basis for planning, or memory for the future, which involves an ability to imagine a sequence of events and to register at the appropriate time whether the proposed operation is proceeding according to plan.

One image is liable to be an extraordinary creation of the psyche. This is the image or complex of images of oneself that float through the mind's eye repeatedly day and night. Far from being a simple representation, this particular complex of images is one that is invested with emotions.

This emotional investment is the subject of the next section, while the location of such images will be dealt with in the subsequent section.

Emotions

If imagery has been a stumbling block for psychology, the question of the emotions has been an even greater one. Whereas the study of imagery has been yielding to recent advances, that of the emotions hasn't, possibly because no-one has worked out a way to make a computer emotional. However, there now seems to be a willingness to concede that just because emotions seem to be some private internal experience, this is no reason to deny that they exist.

The model of the emotions offered here is, therefore, tentative. It is borrowed from Ulric Neisser, who has suggested that emotions are to actions as images are to percepts. Just as we can construct perceptual models at will and flash them up on an internal screen, so also we model our actions and can detach these models from actual actions and can enact them instead on some internal stage. Just as images can have all the technicolour and textual detail of percepts, so emotions can have all the sensations that go with actions. In particular, they will be felt.

Let me expand on this. Scanning internal imagery typically leads to one's eyes moving just as though one was scanning some external scene. Similarly, if emotions are the inner aspects of actions, being emotional should involve minimal movements or tendencies to movement or inhibited movements. It does. These are often quite apparent to outsiders. For example, if I am angry you may stand a bit back from me. Why? Not necessarily because I have said I am angry, and I may have absolutely no intention of striking out at you but my general posture and physiognomy may well indicate someone in whom particular action systems are primed. This is something I may or may not be aware of. Most of us will know of someone who at some time has shouted in a belligerent fashion - "I am not angry".

This potential lack of awareness of what is obviously going on in us is important. What is happening? One possible answer is that there is a clash between the way we wish to perceive our selves and the way that we are. While we may not like the idea of images flashing through our mind that do not correspond with how we wish to see ourselves, our emotions and actions betray to others our intentions in a way that our imaginings do not. They can, therefore, potentially threaten our self-images by incurring the displeasure of others. Furthermore action engages with the world in a way that perception does not, but any engagement is likely to reveal as much about the actor as it is about the world.

It makes sense, therefore, that there should be a mechanism to switch off action and all semblance of action in certain dangerous circumstances. There is. We noted that Cannon argued that the sympathetic system acts to prepare animals for fight or flight. There appears to be a third option which is to play dead, as when a mouse or a bird hangs limply in the jaws of a cat. This freezing, it has been argued, is the prototype of a dissociative reaction. While noting that this seems unlikely to be the case, in that there would appear to be more than one kind of dissociation, the association between emotions and actions outlined above indicates why this kind of dissociation is liable to happen in emotional situations - situations in which the appropriate action or emotion may seriously compromise the individual involved. Such freezing responses are found commonly during the course of a rape or in hostage or other traumatic situations.

While we have separated emotions and images, they come together on the internal stage in the form of emotional imagery, in particular in images of ourselves in action or intending action. Everyone who has a sexual fantasy is well aware that images of our selves in action have consequences in the appropriate action systems. But conversely if actions in compromising situations are liable to be inhibited, the fact of emotional imagery introduces potential contagion into our private fantasies. For example, what happens if as we spectate, the image of our self does things that we cannot countenance? This is the common experience of many who seek psychiatric help. From the mother who sees herself strangling her children in her mind's eye to the man who sees himself picking up a little girl and wondering what prevents the realisation of his worst fears or the disaster survivor who imagines himself going back to help others and wonders why he didn't. Such images are the stuff of obsessional disorders. Where do they come from? Is there some buried source of distressing images - images that in some way reveal our true emotions?

Split Brains & Parallel Processing

Everything we find by experience to be in us which we can see in inanimate bodies must be attributed to our body alone. Everything in us which we conceive entirely incapable of belonging to a body must be attributed to our soul

Descartes - Passions of the Soul; Article 3

Talk about images and emotions is apt today to lead many to think in terms of the right hemisphere of the brain. However, the notion of locating psychopathology to one or other brain hemisphere or to the imbalance between them, received a severe setback at the end of the 19th century. Such notions have resurfaced with recent work on split brain research.

Splitting a brain involves sectioning the corpus callosum, which is a body of fibres connecting one hemisphere to the other. This disconnects the hemispheres. The first operations of this sort were undertaken in the 1950's in an attempt to control severe epilepsy, where abnormal electrical impulses spread from one hemisphere to the other. It proved beneficial in a number of cases. Initial impressions were that subjects whose corpus callosum had been split were no different after their operation. Closer examination however revealed more mysterious effects.

When one's eyes are kept fixed it is possible by suitably positioning objects to have them registered in one cerebral hemisphere before the other. In normal subjects this leads to the information almost instantly being transferred to the other hemisphere. In a subject, whose corpus callosum has been sectioned, information normally gets into both hemispheres because the eyes are never fixed. But by asking subjects to fix their eyes and by positioning objects, it seems that information can be sent to one hemisphere that does not get to the other and that each hemisphere can build up separate memories of what has been presented to them.

Furthermore, the interpretations put on events by both hemispheres may differ. This has led to notions that each side has its own "personality" and that the right side is supposedly the more emotional, creative and intuitive and the left side more analytic, logical and verbal - in a curious echo of the 1880s. In the 1880s, there were movements aimed at teaching people to be ambidextrous as this, it was thought, would enable them to tap into the unused potential of their right hemispheres. So also today there are books, written for the popular market,

purporting to offer techniques to tap into the more creative artistic side of oneself - the suppressed right hemisphere. In 1880 it was proposed that hypnosis acted by accessing right hemisphere processing. A current theory today is that LSD brings about its consciousness expanding effects by facilitating a switch to right hemisphere dominated processing.

While most of these ideas, then and now, belong in the realm of popular mythology, splitting brains has raised in a very acute form the question of localisation of function. In the 1960s and 1970s, it was widely argued that the operation yielded two disconnected but relatively normal hemispheres, within one skull. Two minds. This, it was argued is obscured, in normal people because the two minds run in perfect parallel and are completely intercommunicative. It was also argued that the left hemisphere, by virtue of its language capacity, appeared to construct a common personal myth to serve as an identity for both hemispheres, thereby further obscuring the presence of two minds. Thus if instructions were given to the right hemisphere to scratch, for example, and the left hemisphere was then asked why the scratching, it would never give the answer that it did not know, but rather would come up with some explanation - such as I had an itch.

However, another view on brain functioning and localisation has been gaining favour in recent years. This has been called the modular approach. It has been stimulated in part by findings from split brain work but it owes its primary inspiration to developments in computer programming. The relevant developments have been the progression from the notion of computer programmes written in the form of discrete serial operations to programmes operating on the basis of parallel distributed processing.

Applying this to the psyche, allows the proposal that far from whole areas of the brain being given over to major psychological operations such as speech, imagery or emotions, much smaller areas carry out more specific functions. The functions required for normal speech are spread throughout the brain, both anterior and posterior and on both right and left. They combine in the production of speech. Many of them can be disconnected, without the speech act being completely compromised. However, there are some functions necessary to speech that are usually located on the left, which if damaged lead to serious difficulties - hence speech has seemed to lie on the left-hand side. In the case of images, Kosslyn has proposed that the function that "puts" details into the picture is located in the left hemisphere with other functions being located on the right.

Taking this approach, it is possible to conceive of more than one consciousness within the skull. This follows as the localised functions are in general so small that they could not possibly be personalities in their own right. But they are also so numerous that a number of different psychological organisations may, as it were, avail of their services variously. Thus whereas the double-mind idea in the 1880s and the early split brain work could not readily account for the seeming facts of multiple personality disorder, a modular approach can.

This fits in very well with Janet's contention that, in hysteria and multiple personality disorder, it is psychological functions rather than neural operations that are split. For instance, he argued that learning to ride a bicycle produces a psychological bicycle-riding centre. Subjects who end up unable to ride a bicycle, by virtue of hysteria, have a disorder of this psychological centre rather than of any anatomical structure. The development of such psychological centres, he conceded must at some point have depended on the mobilisation of brain functions. But once established, bicycle riding can call on different modules on different occasions. A modular

approach seems better equipped to meet these requirements than one that would hardwire bicycle riding to a single brain area.

This perhaps is even more clear in the case of writing. Once the psychological centre has been established, a subject may be able to write with their feet or holding a pen in their teeth, if deprived of the original executive mechanisms. In contrast in hysteria, if the idea of writing is compromised, then all subsidiary functions may operate normally - except when it comes to writing.

Taking the modular approach, there will be considerable amounts of potentially conscious processing of many different aspects of a situation going on simultaneously, of which some is selected based on appropriateness for the task in hand. Selection does not necessarily lead to awareness. For example driving a car can happen while one's mind is a million miles away. It follows from this that things may be going on around us of which we are not aware but which we do process and of which we may become aware later on.

It also follows that dramatic and comprehensive changes in psychological functioning may occur abruptly according to the requirements of the situation. One of the better examples of this is when a subject switches from one language to another. Switching, in this case, entails not only accessing different words but also different rules and indeed an entirely different mental set. What changes is not just a set of associative connections between certain words but rather a set of psychological operations, with an accompanying systematic dissociation from all the prompts that would activate the psychobiological structures appropriate to the first language. Given that such large-scale switching can be common and everyday, the idea of switching from one personality to another doesn't seem so impossible.

I will argue in the next chapter that these modular subunits, unlike comparable units in a computer, are likely to be spontaneously active. This will inevitably lead regularly to a generation of internal imagery at variance with a subject's perception of themselves - battering their child for instance. Such images arise accidentally rather than as part of some subterranean revelation. Far from such fantasies revealing the hidden wishes of the subject, they rarely reveal anything of great interest. Rather an individual's reaction to such images is more likely to reveal that person's true nature than are the images themselves.

DISSOCIATION or REPRESSION?

A modular approach to brain functioning envisages a great deal of processing of ongoing stimuli going on in parallel the whole time. From this activity, material is selected and becomes conscious based on appropriateness for the task at hand and integratability with the current model of the self. Other options are passively suppressed, in the sense of just not taken up, rather than actively repressed. One way of putting this is that we dissociate from these other options.

This can be applied to the post-traumatic disorders. The unique feature of the recent definition of PTSD is the presence of intrusive imagery and emotions, which recur repetitively in both waking life and in dreams. The images, far from being disconnected from their emotional investment, are often accompanied by intense emotion, even to the point where subjects re-enact the events in question. These intrusions appear to alternate with episodes of numbness and amnesia. This formulation contrasts with the classic formulations of hysteria,

which portrayed it as a state dominated by amnesia and one in which emotions have been suppressed or have become disconnected from their original object.

However, rereading the older texts, it becomes clear that war veterans and even hysterics from the last century had very similar intrusive experiences and that often it was the ability of the therapist to get into and manipulate the patient's imaginal world that promoted recovery. Thus, Grinker and Spiegel described a pilot, who had been hit on his last flight before going home, who was losing blood and consciousness and who was panicking. In the course of a hypnotic session, he began to re-enact this to the point of slumping and turning pale with his pulse racing, as it would do with blood loss. The therapist, however, suggested that a pane of glass blew out of the cockpit and that refreshing air came blowing in. This led to a revival of both physical and mental state. Janet recounts handling several cases similarly.

The writer who actually came closest to recognising the presence of conscious recurrent imagery in his patients was the 1895 Freud. As we have noted, he came to the conclusion that the images or clues to the trauma were within his subjects' consciousness in a great number of cases. The difficulty lay not in retrieving them so much as in expressing them. To overcome this, he adopted a policy of getting the subject to describe the first thing that came into their mind in as great detail as possible.

The modern recognition of the role that imagery and associated emotion may be playing in this condition has only been possible in the last decade or so with the rehabilitation of imagery and introspection generally. The phenomenon of recurrent imagery suggests psychic work. Material that is difficult to integrate is being wheeled across the stage of awareness episodically. Very similar findings can be reproduced experimentally by showing normal subjects film clips with a variety of material on them. The more distressing the material, the more the subjects afterwards report recurrent intrusive flashbacks and episodes of numbing. The significance of this finding is that it suggests that what happens in the post-traumatic disorders and hysteria does not happen because of some prior psychodynamic pathology.

Autobiographical Memory

The experience of recurrent intrusions of past happenings will almost certainly have occurred to most readers - after interviews for jobs they did not get, for example, or after situations where they have made a serious social blunder. A recently developed concept, termed autobiographical memory, seems relevant here.

Basically the proposal is that we do not organise our memories in some neutral filing system as can be found in a computer, with memories stored from A1, B1 to ...AZ 299, BZ 299 etc. Rather our filing systems are based on "who we are", where this is defined as much in terms of our expectations, hopes, goals and values as in terms of our past. Changing who we are may change the contents of our store of easily retrievable memories completely.

Some idea of how this store of memories can change may be conveyed by the following scenario. Faced with the need to look for a new job, one's image of oneself can become somewhat fluid over the course of a few weeks. It is common to find in this process that individuals who had sworn that it was not in them to do certain jobs or live in certain parts of the country adapt them selves to the realities of where the likely jobs will be. Over the course of a few weeks they may even do the unthinkable and become quite enthusiastic about the possibility of living in London, for example. After all there is so much culture! It’s quite possible

to swing from this to the opposite and become very enthusiastic about rural life over the course of a few weeks, if first one job and then another fails to materialise.

Facing the prospect of an interview, most subjects will mentally rehearse the interview beforehand and create self-images about what will happen, when they get the job (fantasise). It may only be when they enter the interview room and get asked something unexpected that they realise that their current plans for them selves may not coincide with the plans of those on the opposite side of the table. In this case even a very simple but unexpected question, asked to put the interviewee at ease may throw them completely. Commonly reported occurrences are of one's mind going blank or of the whole situation seeming unreal and the interviewers perhaps seeming far away or of one leaving oneself and being able in some way to watch this bumbling idiot make a mess of an interview.

Similarly, soldiers go to war, not expecting to die but rather to be brave and to return home a hero to the girl they left behind, there to settle down with her and to raise a family. It may only be under enemy fire that it comes home to them that the plans the enemy has for them may not coincide with their own. In cases such as having a shell go off close by or being asked an awkward question at interview, the work that went on for several weeks before jobs that never materialised, may need to be reworked in a few minutes. This and the radical nature of the appraisals involved can be expected to lead to a failure of autobiographical memory.

This modern concept of autobiographical memory overlaps considerably with the notion of personal consciousness developed by Janet at the turn of the century. The question of what comes into consciousness, he argued, was determined by its integratability with the existing "I" whose consciousness this is. This I, in addition, will have a social role and future expectations. Hysteria he argued involved splitting in the sphere of personal perception.

Modern though the term autobiographical memory is, the methods of study - collecting memories in response to certain prompts and placing them in individualised reference frames is old. Along with the first systematic population-based study of mental imagery, it goes back to 1883 and Francis Galton. It is only in recent years that the issues he raised have been taken up again and that his investigative approach to psychology has begun to emerge from the shadows of experimental psychology. Why this suspension of what is now termed an ecologically valid approach to psychology should have occurred will occupy us in chapter 10.

Amnesia

There seems at least one problem with my reformulation of Janet's proposal for hysteria. It seems probable that mild degrees of dissociative amnesia have been experienced by every reader of this book and are a common response to social stress. The cases of shellshock or of fugues in students, who just before their exams are found wandering miles away from home not knowing how they got there, indicate that a good dissociative amnesia may even be far more comprehensive than any deficit of memory found in all but the most terminal cases of Alzheimer's dementia. This amnesia, however, seems to be the polar opposite to what appears to be a very vivid remembering in the case of recurrent imagery and emotions.

A simple experiment reported by Bradley and Baddeley sheds some light on this. They examined how well subjects remembered sets of words over a period of time, some of which were emotionally loaded and others not. Initially the emotional words were less well remembered but it seemed that with the passage of time they became more memorable than

the neutral words. Extrapolating to the larger picture, this seems to fit well what happens after shocks or trauma. At first there may be a state of numbness or amnesia. This state of minimal awareness may even persist for years. But sooner or later it begins to resurface.

When it does, there may be a problem in expressing the feelings or images involved if they are incongruent with a current self-image. Indeed, one reason for the neglect of the post-traumatic disorders, other than the more general neglect of consciousness for the past 80 years, has been that typically patients with post-traumatic stress disorder have had difficulty articulating such material, despite its salience in their minds.

They have tended to repress the material - just as many of us do. Returning to the example of a parent glimpsing an image of them selves possibly battering one of their children, the immediate reaction is to repress the material. Such a repression, in contrast to the analytic usage of this word, suggests an active suppression of conscious material that the person expects it would not be politic either to dwell on or to make public. Besides which, we all feel that such repression works. There is a feeling and evidence that indulgent fantasising may lead on to murder or other unwelcome behaviours, whereas putting thoughts out of one's mind is a normal method to control the malignant growth of a fantasy.

I have suggested above that such a repression does not imply that the repressed material reveals the true nature of the individual. In a cruel twist, the individuals who are most likely to be appalled by images of themselves harming their children are the ones least likely to do so. So abhorrent will they find the idea that they will attempt to "over-repress" it - to make sure it is really gone. All too often this leads to a pushing of the offending image out to the edge of consciousness but, in order to keep a check on where it is, it cannot be pushed completely out. It is, therefore, even more likely to recur. This kind of vicious circle is likely to get established if the wrong kind of image afflicts an individual at the wrong time - at a time when they are more vulnerable to the particular implications inherent in the image. This "neurotic" round is likely therefore to become established as much by accident as anything else.

When it comes to talking about recurrent intrusive imagery, there is a further difficulty. Declaring ourselves verbally is essentially a univocal communication that, at any one point in time, can only abstract certain aspects of the stream of consciousness. In part, therefore, the difficulty in talking about recurrent imagery will be that there is always far more going on on our conscious stages than we can ever describe. The problem is like commenting on a football match. Sometimes, the most important events happen on a different part of the stage to that which you happen to have your eye on at that moment.

It would seem likely, from Freud's own descriptions, that both dissociation and relatively conscious repression, as well as problems in translating images into words were all processes that were operative in those subjects in psychotherapy with him around 1895. What is not clear from his very vivid descriptions is whether any appeal to a dynamic unconscious, as it was later to become, was or is necessary.

Physical Amnesia

While it seems that the hysterics of old may all have had recurrent intrusive imagery and emotions that were ignored in the general ignoring of the psyche, they also had blindness and paralyses. How can these be explained? I have suggested that remembering is in a sense re-perceiving. Equally however, perceiving is remembering. The percepts or images we

conjure up to interpret or model what it is that lies before us depend heavily on past experience with earlier percepts and our memory of the outcome of such experiences. Given this, it may seem less surprising that if dissociative amnesia can occur in the face of stress so also might dissociative blindness.

Of course on this basis all of the physical manifestations of hysteria might be put down to dissociation. After all movement also involves memory and hence paralyses could be seen as a form of amnesia. This in essence was Janet's argument. He argued that at no point was the subject truly amnesic, paralysed or unable to sense normally but that there was a failure of personal perception. Sensations and movement were not integrated into a self.

PSYCHOLOGY OF CONSCIOUSNESS

This raises the question of what integrates? What controls access into awareness? To answer this, we must have a model of consciousness itself. Thinking about models of consciousness, however, has been even slower to get going after the hiatus of behaviourism than studies on imagery and emotions.

There is a good deal of empirical research going on at the moment, which seems likely to lead to more detailed and powerful models. This includes a sampling of streams of consciousness, in William James' phrase the blooming buzzing confusion of consciousness, to explore the internal monologues, reminiscences, rehearsals and speculative forays that constitute consciousness. Another seam of investigative mining is a phenomenon which seems to be the opposite of recurrent intrusive imagery - recurrent momentary forgetting. But the obvious point to make in the face of Freudian or other claims regarding consciousness or the unconscious is that we still simply have not got much of a clue about how consciousness operates.

At present there are broadly speaking two types of model of consciousness. Both argue that the bulk of cognitive processing is essentially non-conscious. By non-conscious here, however, I do not mean unconscious in the Freudian sense but rather subconscious in something closer to Janet's sense. The example of processing of instructions or events while under anaesthesia, outlined in chapter 5, indicates the existence of this subconscious processing or what is sometimes now termed the cognitive unconscious. This appears to involve a form of priming that is distinct from the subcortical priming that forms the basis for the vigilance and appetitive systems, outlined earlier in the chapter (see figure 1).

In the first model of consciousness, associated with the names of George Mandler and Tim Shallice among others, most processing even if complex and detailed occurs out of consciousness. But it is argued that there are some operations that require awareness. These are operations such as choosing, appraising and comparing. Thus at points of decision making or when learning a new skill, one becomes conscious of competing representations, even acutely conscious, and one monitors the evidence in favour of the various options. This also happens when there is a mismatch. Functions such as driving a car may be proceeding smoothly with minimal awareness but if one's performance does not fit with expectations, one will suddenly switch back to concentrated awareness.

A quite different model has been offered by Tony Marcel. He has argued that it is not the case that representations compete and that the most appropriate ones enter consciousness. Rather non-conscious processing while it may be elaborate and representational does not contain

images or emotions. Entry into conscious awareness only happens when such representations are further synthesised into the higher-level models that we call images and emotions.

Images on a computer screen provide an analogy for this. The greater part of a computer's processing is in non-image form. The creation of images enters information into a different mode; one shaped by external needs and suitable for further interaction with the outside. An important implication of this kind of model is that there would be no images lying completely outside of potential awareness.

A converse point may focus the issues here, which is that without images, emotions and memories, we would not be conscious, in the normal sense of the word. In subjects with profound amnesia, there may be moment to moment awareness, but what is lacking usually is a coherent sense of self, a self-consciousness.

Marcel has carried out some of the most widely cited experiments on consciousness. He has shown that subjects presented with keywords, under conditions in which they are unable to register seeing them, are still able to distinguish them and their distinctions bias subsequent behaviour. For example, presentation with either the word bread or river, in a manner that leaves the subject unaware that they have seen anything, will significantly bias word associations to the word bank subsequently presented explicitly.

Such findings have interested the beleaguered defenders of psychoanalysis. Howard Shevrin, whose subject with a blood phobia, A.M., was outlined in chapter 2, applied a variation of Marcel's methods to the case of A.M. Based on the clinical interpretation that A.M. had sadomasochistic impulses and that his phobia of blood had a symbolic relation with these impulses, Shevrin and colleagues presented A.M. subliminally with lists of words, that they thought might be particularly liable to access the conflicts that they proposed must be operative in his dynamic unconscious. Their findings were that the words they chose did seem to threaten A.M. as judged on EEG recordings of brain functioning. From this, and comparable results in other cases, they concluded that modern neuropsychology was on the way to the rescue of psychoanalysis.

But Marcel, in reply has questioned why it should be supposed that giving a subliminal stimulus should access the dynamic unconscious any more than giving a supraliminal one. Masking the experimental stimulus, as he has done, he argued only prevents it entering conscious awareness. It doesn't necessarily make for access to a dynamic unconscious. This is particularly clear if one takes a modular approach, which envisages a myriad of relatively autonomous processing units with probably not much leakage from one area of processing to another. Non-conscious entry into this means that processing is stimulated in some subunits but not with the degree of intensity necessary for the results of processing to force their way into conscious awareness.

A further problem arises from recent neurobiological research. The analytic approaches generally have postulated Oedipal and pre-Oedipal conflicts in childhood and that it is these that give rise to the phenomenon of childhood amnesia. However, since the early 1980s it has become clear that rather dramatic changes in cortical architecture take place in childhood, so that over the course of child's first few years they lose up to half of their cortical cells and subsequently lose a great number of the nervous processes connecting one cell with another. If there is any biological basis to memory this must mean that the circuits on which early

memories may be laid down are being dug up and resurfaced repeatedly. It seems no surprise that memories during this period are liable to be scanty.

However, if modern analytic notions seem without anatomical justification, the models of consciousness offered above seem to talk too much of computer processes and not enough of the contentless intimations and urges that the locus coeruleus and ventral tegmentum push into awareness. They do not seem dark enough or irrational enough to account for life in the raw. In its early years, the willingness of psychoanalysis to tackle the biological questions of lust and appetites found favour with many in the psychological community. In the next chapter I will return to biology and to a less mechanical model of psychological functioning in an attempt to bring the models of psychological functioning outlined above to life.

8 THE DYNAMIC UNCONSCIOUS & THE DYNAMICS OF CONSCIOUSNESS

In chapter 7, the scope of the book was broadened, from a historical study of the evolution of the concepts of hysteria and post-traumatic stress disorder, to focus on recent work on the nature of the unconscious and the issue of consciousness. This chapter will take these issues further and in particular will pick up on the interaction between the unconscious and consciousness. In doing so it will return to the original mechanism that Freud envisaged underlay the dynamism of the unconscious - rhythmicity. However, far from having the inevitability of a mechanical operation, as envisaged by Freud, I will argue that both the dynamic unconscious and consciousness with which it interacts, operate probabilistically in a manner aimed at anticipating the future rather than defending against the past.

There are good reasons for taking up these issues in terms of depression. The clinical picture of depression can be mapped onto that of a post-traumatic disorder quite well. Both involve a certain numbness, with recurrent waves of emotion. Both may involve little difficulty immediately after the trauma only to lead to an apparent resurfacing of the problem at a later date - seemingly triggered by innocuous events.

Janet, Breuer and Freud all argued for some version of this model. For Janet almost every hysteric was also depressed and it was the lowering of mental energy brought about by the depression that permitted the development of hysteria. Breuer speculated that a single dominating unhappy idea, lying in the subconscious of depressives, could plausibly produce the clinical signs and symptoms of depression. For Freud, this single dominating unhappy idea was the consequence of losing out in the Oedipal struggle. Further losses, he argued, cause depression by reawakening a primal loss.

For the various object relations theorists, we all adopt "a depressive position" even earlier in life than the Oedipal phase. This supposedly occurs in the process of negotiating independence from our mother and recurs at different developmental stages when the question of independence arises. The occurrence of depression in later life, then depends on the adequacy of our efforts to resolve the difficulties inherent in the balance between dependence and independence.

However intuitively plausible this view is, there are a number of difficulties with it. Many of the life events that trigger depression are not so traumatic - such as changing jobs because of promotion or moving to the house of one's dreams. In addition, where detailed investigation of subjects with borderline disorders and Briquet's syndrome has indicated an unrecognised history of physical or sexual abuse or gross disturbance of some sort in their past, this has not been the case for depression. Individuals who develop major depressive disorders appear to have no greater frequency of traumatic events in their childhood than those who do not become depressed. Furthermore, Briquet's syndrome and the borderline disorders are relatively rare conditions but it now seems that most of us suffer a recognisable depressive disorder at some point in time.

More significantly perhaps, in contrast to post-traumatic disorders, the content of a depressive disorder is not dominated by the reliving of some prior unresolved event. This is also in contrast to grief reactions. In grief, most normal subjects are consumed by recurrent intrusive imagery and emotions, often triggered by reminders of their loss. Some grief reactions, just like the post-traumatic neuroses, seem to go underground only to resurface later in a most

painful and acute reliving of an earlier loss. In general, grief reactions map far more closely onto the model of a post-traumatic neurosis than does depression.
Finally, unlike the post-traumatic neuroses, depressive disorders respond to antidepressants and to ECT. This response to physical treatments rather than to "talking therapies" has been a corner stone in the medical argument that depression is an illness rather than simply a neurosis. Depressions generally are subsumed under the category of manic-depressive psychosis - even where the subject may never have been manic, shown evidence of delusional beliefs or appeared to be hallucinating.

The central importance of depression in this context lies in the accumulating body of evidence that this "psychosis" is in most instances a mild disorder. When severe, depressive disorders are liable to be so by virtue of the neurotic responses they mobilise rather than by virtue of any intrinsic severity. When taken in conjunction with the potential severity of the post-traumatic disorders, this "mildness" points strongly to a need to undo the equation severity = psychosis = biological disorder, that applies at present to psychiatric disorders and underpins the professional demarcation currently in place between psychiatrists and psychologists, to the detriment of both professions and of course those who seek help from them.

There is a further relevance in the case of depression, which is that, as Janet argued, it may lay the basis for the later development of many neuroses. In so doing, it opens up a new set of interpretative hazards, one of which is a liability to mistakenly attribute recurrent images and emotions to traumas that occurred in the past. The other is that the neuroses that develop in response to depression do not arise clearly from either endogenous or environmental sources alone. They arise rather in a fashion that may be termed accidental.

RHYTHMICITY

The enchainment of past and future
Woven in the weakness of the changing body
Protects mankind from heaven and damnation
Which flesh cannot endure

Burnt Norton: TS Eliot

In attempting to come to grips with these issues, it is worth while to return to the problem Freud had in writing the Project for a Scientific Psychology. He was faced with a need to postulate an observer, within the brain, to account for the ability of a neuronal network to screen incoming information and detect what was likely to be acceptable and what was not. He was forced to conclude that some biological experience, probably innate must be involved. It was this turn to the innate that led later to the development of his ideas about the Id and a switch from a psychology of consciousness to psychoanalysis.

Very similar problems faced the behaviourist psychologists some years later. Postulating a mechanical model of the mind, very similar to that in Freud's Project, behaviourists were faced with some awkward facts. In essence the various forms of behaviourism postulate that behaviour is a complex set of habits, whether these are established by simple association or reward reinforced learning. Yet when asked to recall a name, we are able to do so on some occasions but not on others. When shooting or bowling or engaging in any other activity, we perform variably. Some days are good, others are not. Some times of the day we feel sharp, at other times we lose our edge.

As noted by Hull, the leading behaviourist of the 1930s, humans simply are not like computers or robots who, once programmed, mechanically repeat the performance. Rats, the favourite experimental animal of the behaviourists, seem to be frustratingly like humans in this regard also. For many years, behaviourists persisted with efforts aimed at getting rats to sleep or eat on cue, as learning theory suggested that all significant behaviour should be cue-based. However, it is not possible to condition a rat to fall asleep when and only when the clock in its cage shows twelve o'clock. When it comes to sleeping, eating and drinking, and indeed most of the behaviours that really count, as opposed to running mazes or pressing levers, rats seem to follow some internal dynamic of their own. Not only that but when rats are taught intricate tasks or when their emotions are conditioned to certain stimuli, the learning shows up best at the same time of the day as they were taught. At other times of the day the experiments just work less well.

Such experimental findings do not only apply to rats. There are easily observable cycles in many of our behaviours, whether sleeping and waking or eating and drinking or remembering and learning. Not only that but these easily observable rhythms are only the tip of an iceberg. It has been said that to have life is to have rhythmicity. But even this underestimates the extent of the phenomenon. Ilya Prigogine demonstrated that even non-living collections of chemicals may start oscillating synchronously. Far from being a source of instability, such oscillations bring an order into what would otherwise be chaos. This order has been central to the development of life itself. There is not a living cell or system, that has not built an organised system of oscillations into its functioning. Typical examples are the cascade systems in enzymes or the feedback regulation of enzyme activity. Adjacent cells in an organ end up oscillating in synchrony and there are typical rhythms in all our organ systems, from heart rate variations during the day, to rhythms in visual acuity, characteristic pulsatile outputs for each of our hormones, rest-activity rhythms and rhythms in deep body temperature.

Apart from the long-term controls on behaviour that such a system sets up, oscillatory systems lead to the phenomenon of pacing and the existence of pacemakers. Nerves are not just wet wires along which electrical impulses travel. They are cells and accordingly are composed of a multitude of enzyme systems and other components, all which are intrinsically oscillating. As these systems are geared toward the generation and transmission of impulses, it is inevitable that such generation should occur **spontaneously**. Spontaneous firing can even be demonstrated in nerve cells grown in culture and isolated from all other influences.

An interesting consequence of this is that nerve cells are never constitute some tabula rasa on which an environment may write as it wishes. Rather environmental influences may act in one of two ways - either to add to or to damp down what is happening spontaneously. Thus the vagus nerve slows the heart from its spontaneous rate, while sympathetic nerves speed it up but neither are responsible for the spontaneous baseline rate. Similarly with the brain. Our organs of balance discharge spontaneously; turning one way causes the discharge rate to speed up, turning the other way causes it to slow down.

Circadian Rhythms

The first recorded observations on rhythmicity were made by a French astronomer DeMairan in 1729. He noted that plants raised their leaves to the sun even before it rose. Not only that but they still raised their leaves even if removed to sunless caves. This suggested some active organising process rather than a passive response to the environment.

Darwin later recognised daily, weekly and monthly cycles in behaviour and argued that these must stem from a common descent from tidal-dependent marine organisms. Living on the water-line would lead to the development of weekly and daily cycles. In general, the existence of rhythmicity allows an organism to avail of temporal changes. This offers a wider variety of evolutionary niches for organisms. They are not limited to the spatial opportunities offered by the environment but can share the space with other occupants, for example, if they can manage to confine their active utilisation of the space to a different time frame. Despite this identification as a potentially important factor in evolution, the study of rhythmicity has never attained full scientific respectability.

Some responsibility for this, ironically, may lie with Fliess who first convinced Freud of the ubiquitous nature of rhythmicity and of its significance for mental life. Fliess developed a system centred on the presence of innate 23 (male/physical) and 28 day (female/emotional) rhythmic cycles. In the 1920s, a further 33-day cycle was proposed by Alfred Teltscher, an Austrian engineer based on work done on the intellectual performance of students at school and university. This "biorhythm" model of rhythmicity has tended to discredit the entire scientific study of rhythms.

But there have a number of other difficulties as well. Firstly, scientists are concerned with regular and predictable phenomena and have not had the inclination or, up till now, the necessary statistical tools to take on the study of life as a pulsing, highly variable phenomenon. Secondly, the pulses have not always been so obvious. This is because not everything beats in synchrony. Commonly, different rhythms are loosely coordinated with each other. This leads to a masking of many rhythms by others, so that there appears instead to be conditions of calm stability rather than dramatic variability.

Thirdly, the idea of dramatic variability seems to go against one of the oldest principles in biology, the principle of homeostasis. This principle, first propounded by Claude Bernard in 1865, states that living systems aim at maintaining constant conditions. For example, arrangements are made to excrete waste products if they build up past a certain point or to counterbalance shifts in blood pressure or acidity in the blood, should either of these vary beyond fairly narrow limits. This principle would on the surface appear to militate against any dramatic variability in vital functions.

The situation is now changing. The necessary statistical tools to investigate rhythmicity are now available. Where they were once seen as being in contradiction with the principle of homeostasis, circadian rhythms are increasingly seen as a three-dimensional example of homeostasis. Rhythmicity allows the priming of physiological functions for imminent use and shuts down functions that are no longer needed. This priming and shutting down makes more gradual the degree of variation that occurs at times of physiological activity.

For example, there are rhythms in eating but also anticipatory rhythms in the brain cells responsible for appetite, in the hormones necessary for efficient digestion and in the intestinal enzymes necessary for processing the food load. This complex network is primed before we are even aware of wanting to eat, so that once we start eating the digestive physiology will smoothly handle the task with the minimum of excessive variation. Following digestion all these systems shut down. This arrangement permits the efficient mobilisation of resources and permits functions that are not needed to lie quiescent.

Clocks & Rhythms

Rhythmicity in the nervous system is paced, just as it is in the heart. This function is carried out by a "clock", lying in the suprachiasmatic nucleus, which is area of the brain that regulates appetite, fluid balance, temperature, and hormonal secretion.

The clock pacemakes and by this means "organises" internal rhythms. It also synchronises external routines and internal rhythms. Synchrony with environmental rhythms does not just happen as one might expect, given two adjacent oscillating systems. Totally free from environmental influences rhythms continue to hold their shape but that shape becomes extended to a 25-hour or longer cycle rather than a 24-hour one. Given an internal tendency to a 25-hour rhythm, there is always a need for adjustment.

There is a consequence of this organisation for the culture of nervous problems. From antiquity, observers had noted that there seemed to be a periodicity in episodes of nervous disorder. This seemed most clear in manic-depressive illness, as subjects often cycled regularly between depression and mania or had recurrent illnesses of about the same length and often at the same time each year. This led to efforts to determine the period of the illness, or the period between episodes of the illness - with Fliess' biorhythm theory being a highpoint in these efforts. The implication was that there was some internal clock marking time until the next episode, which would happen regardless of what else might be happening in the life of the individual at the time.

Such a view reinforced notions that depression and mania are endogenous illnesses, whose onsets have little to do with social factors and more to do with some sort of degenerate reflex. But the discovery that the period of the internal clock is circa one day puts paid to such ideas. Far from circadian rhythms following Fliessian harmonics that roll on despite what may be going on in the environment, the clock seems to be reset several times a day by environmental factors. This opens up a quite different perspective on depressive disorders, which is that they might arise by virtue of a mismatch between internal rhythms and external routines - as for example happens in jet lag and shift work.

THE RHYTHMIC UNCONSCIOUS

Rhythms can be entrained by environmental factors. Two of the most important factors are the light-dark and the temperature cycles. Entrainment to such cycles leads to considerable structuring of internal physiological functions. Thus for a sleep-wake cycle to run efficiently in parallel with the light-dark cycle, there must be programmes that turn off the need for micturition or defecation during the night. All physiological functions are structured in this way so that those needed at particular points of the 24-hour cycle are primed at the pertinent times. In this way the organism both maximises its chances of mastering its environment and knows something about the environment.

For Freud and thinkers of his day, physics and physical concepts, in particular the concept of energy, provided the ultimate paradigm. Theories were respectable in so far as they appeared to conform to the principle of the conservation of energy or to the second law of thermodynamics. Today, at least in biology, the notion of information is the core reference point. Circadian rhythms embody biological information that antedates even the evolution of DNA. The capacity for anticipating needs based on internalised knowledge of the environment, that they permit, can be seen in plants which raise their leaves to the sun even

before it has risen. It can be seen in the dramatic changes in hormone levels, nervous system activity and cardiovascular tone that takes place in us before we wake, which prepares us to face the stresses of the waking day. It can be seen in animals who live underground and emerge only after dark has fallen, when predators have gone. Putting their noses out of door to check on whether it is safe to come out would be dangerous. Rhythms provide a means of knowing without taking these risks.

While light and temperature cycles are of some importance in man, social cycles are of much greater importance to the organisation of human rhythmicity. We appear to structure our internal biologies in accordance with the routines of significant others in our lives. We take our cues from them for waking, eating and sleeping, regardless of whether it is bright or dark outside. The attempt to isolate subjects from social influences has proved to be very difficult. Even sending people down into caves with no apparent contact with the outside world may not succeed.

This structuring of our biologies in response to social signals provides us with some knowledge of our social situations - an unconscious knowledge. But it is important to specify more closely what kind of knowledge that is involved. Life evolves in progressively more complicated forms on the basis of bets. The bet being that the latest species has incorporated (in the literal sense of built into the body), ever better strategies for survival in the face of uncertainty. Survival involves managing the future rather than defending against the past.

All plant and most animal species operate on the basis of fixed bets. In response to certain important stimuli, there are fixed reactions. Recent evolution has taken a gamble of introducing flexibility into this system of fixed reaction patterns. Corticate animals, especially the higher mammals, can model their environment rather than just respond automatically. But even in these cases, the form of modelling that is perception is a bet. We fill in lines or dots that are not there to see squares and rectangles, on the basis of what seems like a good bet from the available evidence. We can adjust our bets with a little practice - thus given a few days practice we can cope with a world seen through upside down spectacles.

For this conscious modelling to take place, most physical and mental functions must happen automatically. This is necessary for the organism to have enough time left over to play with the complex predictive models that are perceptions. Circadian rhythms are one of our most fundamental set of bets aimed at achieving just this. They follow the best bets in our social environment. Like perceptions, they stay programmed to what seems like the best bet until the inevitable force of circumstance or repeated failures of prediction lead to a reversal.

When entrainment to the environment breaks down the consequences are twofold. One is a decreased efficiency of adaptation to external circumstances. The other is a decreased internal efficiency as the structure built up in relation to environmental order tends to collapse. This failure of adaptation and decreased internal efficiency can be seen in outline in states of jet lag or when shift work becomes disruptive. These changes affect cognition, motivation and mood.

Rhythms & Cognition

As noted, behaviourist psychologists found that their animals did not learn like automata. One recently recognised reason for this involves state-dependent learning. This depends on

the idea that the brain, unlike a computer, can be influenced by things other than the input from the keyboard. The brains hardware is turning over quite apart from any inputs from outside.

What is involved becomes clear in the case of drugs and fevers. By drinking a small amount of alcohol, for example, we alter our brain state. What we register thereafter must alter an already altered brain state. The combined effects of both alterations will be most easily reproducible again when I next have a similar amount of alcohol. It is this that underlies the experience that many have had of having conversations over a drink that they appear later unable to recall. Based on this if I leave my car somewhere because I have had too much to drink and cannot remember where it is the next day, I am more likely to remember if I have another drink. In the same way fevers change brain state. As a result, it may be very difficult to remember much more than in a hazy way the few days spent lying in bed feverish. If we get to the stage of delirium, we may remember nothing.

Circadian rhythms provide an encompassing source of brain state changes. Everything in the brain is rhythmically turning over; hormones, neurotransmitters, receptors and other neurobiological elements. It is not surprising, therefore, to find that time of day influences cognitive functions such as learning and remembering.

This happens in two ways. One is through what is called the basic rest activity cycle. This is a 120 to 180 minute rhythm, which can be seen most clearly in infants who wake and sleep on a three hour cycle. In later life this is subsumed into 24-hour frame but it is still recognisably present dictating a pattern of varying energy levels during the day and our entries to and exits from the various stages of sleep. This cycle operates to alter the tone of the locus coeruleus such that levels of arousal and vigilance fluctuate rhythmically. In this manner, during both day and night we pass, willy-nilly, through a sequence of stages of consciousness. Each of these stages have their predominant set of associations. This in part may account for the recurrent rather than the constant nature of intrusive imagery and emotions in the post-traumatic disorders - it certainly seems to account for those recurrent intrusive images we call dreams.

There is a second way in which rhythms affect our thoughts. This follows as the very stuff of thoughts and memories is constantly changing, whether or not we are actively thinking and remembering. As you, the reader sit there reading, you are probably aware of images and thoughts coming to mind unbidden and on the other hand of finding it difficult to consistently keep your mind on some aspect of the text that you might want to think about. Such seemingly unprompted images and fantasies have long been material of interest to psychodynamically oriented theorists, who argue that such fantasies are far from unprompted. It is this that has led to claims that lurking behind their seeming unconnectedness is a royal road to a dynamic unconscious, whose contents may be brought into consciousness by the careful scrutiny of associations.

However if circadian change means anything it means that the very stuff from which images are made of is turning over like every thing else in the brain. This has two consequences. One is that our images of things don't last long. Short term memory typically only lasts 30 seconds before the original impression of some thing that we register decays.

The other is that images must be suggesting themselves the whole time, as the stuff of which they are made is reconfiguring itself constantly. This should give rise to something like what happens when we look at clouds or fires. Images suggest themselves from the changing shapes. The images we see in such situations will depend on the current concerns of what can be called the ego or personal consciousness. But if this is the case, then it would seem that the Id does not push images up into consciousness, against which egos defend but rather that the images the ego sees, or is not prepared to see, all lie within consciousness.

Rhythms & Motives

Those basic motives we call appetites, operating through the ventral tegmental system are obviously under rhythmic control. But the influence of rhythmicity on motivation extends much further than this. For example, working with chaffinches, Rutger Wever found that exposure to constant bright light leads eventually to a state of sustained sleepless activation. Thus while animals cannot be kept awake by simply removing the cues they have been trained to fall asleep to, as the behaviourists found, it seems the activating effects of light can convert their sleep-wake cycles into more active-less active cycles.

An implication of these experiments is that much of our normal behaviour stems simply from the strategic necessity of organic systems to be in harmony with their environment. For humans this means being in harmony with social periodicities. Given such harmonisation we fall asleep in part not because we want to but because everyone else does. The weight of what everyone else is doing, as well as environmental factors such as light and temperature cycles, feeds through and determines a great deal of our behaviour by affecting our physiology - leaving us with little effective choice in the matter.

Mania is characterised by a state of sustained sleepless activation, quite comparable to that found by Wever in chaffinches. From armchair distance it is sometimes assumed that in mania the subject is putting on their hyperactivity. However, the analysis outlined above suggests the possibility that subjects are being driven. This accords with what many subjects say - that their activity is involuntary.

In depression there is the reverse. Subjects are sapped of energy or have the wind taken out of their sails. Again they usually say that this fatigue is an affliction rather than some thing they can control. Commonly, they are bewildered at their inability to summon up the energy to do things they want to do. But the only reason they can come up with to explain this lack of energy is that there must be something wrong with their will power. Those supposed to be helping them often fail to point out other more benign possibilities and indeed often bring about further demoralisation by suggesting that the person is truly at odds with themselves and will not get better until they face up to some unpleasant truths.

Rhythms & the Id

Putting the unconscious and rhythmic inputs to cognition and motivation together produces something close to the Freudian Id. It also returns us to a psychology of the unconscious that was developed first by Janet and James but which has seen little development since until recently. It was William James who first proposed that habits play an important role in mental life. As so much of what we do appears to occur automatically and unconsciously, yet we are not reflex dominated automata, James argued, associations based on mental imagery cannot be the whole story. Habits must be more important that we often concede.

According to James habits arise spontaneously. They are not necessarily linked to pleasure and pain. They just grow in the soil of our lives like wild flowers, in whatever circumstances we happen to be. Even in prison with no material pleasures or pains we get into routines. Rather than being something that depends on pleasure, habits grow because they confer advantages. The first is that once acquired the behaviour that is habitual occurs effortlessly. Secondly, attention is freed to focus on the unforeseen. Finally there is an economising of memory. Constant repetition of a skill so that it becomes habitual means that it can occur repeatedly without us ever storing as memories all of the various times we carry out the particular operation. So much needs to be stored in memory as it is, that this economy offered by habit is not an insignificant one.

There are 2 important aspects of this arrangement. One is that in the case of highly routinised behaviours, conscious awareness may be a hindrance - consciously remembering how to ride a bicycle for example can get in the way of riding it. The other point is that typically habits bear no mark of their origin. They are eternally present. As opposed to conscious memories, they are impersonal. In contrast, the act of conscious remembering involves the experience of "this is part of my past I am remembering". Hence memories are autobiographical in a way that habits are not.

If we extend the notion of habits to include a set of deeply ingrained habitual ways to handle impulses, that are established in early childhood and regarding whose establishment we may be totally unaware, such an Id would like the Freudian Id be timeless and impersonal. If we then embed the notion of habits, in the larger context of routines, we produce a dynamic Id that is predicated on circadian functioning. Like habits, routine suggests an organisation of knowledge. It suggests that within particular frameworks much of what will happen has already been anticipated, already been faced, already been sorted out, so that when recurring it can be handled automatically, apparently even without thought. Routines overlap with habits. They make the acquisition of habits possible (as in state dependent learning) and are in turn structured by habits. They have a neurophysiological foundation in circadian rhythms and in turn act to maintain particular circadian organisations.

We master large amounts of our lives by virtue of the social routines we engage in, literally by incorporating the information into our physiology. Who I am and the routines in which I live overlap. Familiar routines give me a sense of who I am. Unfamiliar ones may confront me with the sense of not being sure about who I am. In other words, much of who we are or what we feel ourselves to be gets buried in our activities. This sense of who I am may be totally at odds with any account of myself I am able to give. Giving an account of myself is another skill - one not easily routinisable, as any serious account will need constant updating. But the notion that I do not know who I am just because I cannot give some analyst a good account of myself, does not hold up. Simply surviving indicates an "ecologically valid self-knowledge".

This proposed Id therefore would be a repository of unconscious knowledge that shapes the later acquisition of conscious associations. All of which would help to meet some of the problems faced by Freud in the Project. There are two clear differences, however, between, the unconscious as conceived here and that proposed by Freud. The rhythmic unconscious, outlined above, is radically unconscious. It does not contain symbols or images. It does not contain inherited knowledge - although the capacity to be structured in a manner that will assist adaptation is inherited.

There is a second difference. Even if I am skilled at dissecting my own motives and well used to giving an account of myself, there is much that no one can put in words and be confident about. Partly because a certain amount of meaning is literally buried in each act. Partly also because all acts have at least a certain amount of incompleteness to them. All are performed in the face of uncertainty. Rather than being the repository of primal truths, the unconscious proposed here is composed of fallible anticipations of the future. Depression provides one instance of what happens when unconscious predictions go wrong. It also illustrates how the operations of consciousness are predicated on anticipating the future.

RHYTHM AND BLUES

While it has always been believed that depression is consequent on adversity, for decades there were a group of depressions known as the endogenous depressions, which were supposed to come out of the blue. These were supposed to involve a chemical imbalance and accordingly they were seen as a medical illness appropriately treated with pills. However, starting from the late 1960s, a series of studies have shown that the endogenous depressions are precipitated by life events. The conventional view is that the life event is traumatic and precipitates a post-traumatic stress disorder of some sort. As we have noted there are problems with this view.

An alternative is that while life events may be traumatic, and produce grief, they also involve a disruption of routines. This leads to a loss of clear signals to internal rhythmicity, with a consequent breakdown or the kind that happens in jet lag or after shift work - a life event lag.

It may often be weeks after a death, a birth, a house move or a change of job, weeks after one has got over the initial reactions before the depression strikes. Subjects are often amazed at becoming depressed some time after they thought they had come to terms with the change in their life. This delayed onset group of changes is not unlike the delay of several weeks that it takes for the rhythms of subjects in isolation experiments to drift out of phase with the environment. It is a necessary consequence of a system which is designed to track environmental change but not each and every change in the environment.

Circadian rhythms track environmental order. Accordingly, we can completely change our environment - go on vacations - without ill effects. But moving jobs, even within the same building, may be an entirely different affair. Personal order and the efficient functioning of one's entire body in response to that order may be disorganised. All the cues that one had built up in the old environment, which were reliable indicators of what was likely to happen next may be gone and with them go important signals to internal processes of what to prepare for next. This is analogous to what happens when two pendulums are swinging side by side; if one is interfered with, the period of the second also changes - with time.

Disruption of circadian rhythms, in this manner, leads to a loss of vitality - as in shift work maladaptation syndrome. There is a considerable amount of evidence that the majority of depressions are rather like what happens to us after shift work. They are noticeable but not disabling. They involve the same core complaints - disturbances of behaviours that have significant automatic and rhythmic components, such as sleep, appetite and libido as well as energy levels and concentration. Most run a brief self-limiting course, as do shift work disturbances. This would be predicted of a rhythm disorder as rhythms must inevitably reharmonise with environmental periodicities.

Depression in this context is being taken to mean not sadness, guilt or hopelessness but dysphoria, lethargy and apathy. This may run against the grain of common expectation of what is meant by depression but current evidence would suggest that far from having intrusive imagery or a clear psychological problem, depressed subjects, if they go to their general practitioners present with flu-like complaints of pain and lethargy. So much so that they are typically not diagnosed as having a psychological problem, unless in addition they start talking about guilt or sadness.

And of course the problem is improved by a physical treatment - antidepressants. These have the rather curious property of being neither euphoriant nor tranquillising. Unlike tranquilizers, euphoriants, tea, coffee, neuroleptics and every other agent which acts on the brain, they do not work immediately. They take up to two weeks to make much difference - a time period consistent with the resolution of a rhythm disorder.

Mood & Emotion

I am proposing that a disruption of circadian rhythms is at the heart of a mood disturbance. But what is a mood? For most of us, the word mood usually seems to mean some sort of extended emotion. However, closer scrutiny of the two terms and their usages suggests that moods and emotions are not the same kind of thing. Moods appear to be something more like climate in contrast to emotions which are the weather. Given a particular climate, certain weather conditions are more likely but sustained weather conditions of one sort does not indicate that the basic climate has changed. Put another way, mood is like the pedal functions of a piano, whereas emotions are like the individual keys. Depressing the pedal colours the overall tone but does not produce melodies. The combination of emotional melodies may be all that is audible to the undiscriminating ear but the texture of a piece can be substantially influenced by use of the pedals.

As noted in chapter 7, there do seem to be something like pleasure spots in some of the oldest brain areas. But pleasure seems to be something derived from the patterning of inputs through these pathways; familiar patterns are pleasant and unfamiliar ones less pleasant.

A striking feature of the brain is that in contrast to the centres for vision, hearing, movement and touch there are no pain centres. So how do we register pain? The answer seems to be that the stimuli that carry touch or sound or whatever sensation, when firing in unusual, or unfamiliar, patterns are painful. Noise that is too loud is painful. Pressure on my arm that is too intense is painful. Stimuli that I do not normally have, such as the ones from the chemicals liberated in the tissues around the wound on my hand, are painful.

There are good grounds based on this understanding of pain to suggest that rhythms provide the substrate for what we call mood. When functioning normally they are, by definition, the patterns of familiarity. When out of joint as in jet lag, or with shift work disturbances, there is dysphoria bordering on the painful. Significantly, many depressed subjects complain of pain and malaise rather than or underlying their emotions of sadness, hopeless and guilt.

It has been notoriously difficult to put the dysphoria of depression into words. The model being offered here may help explain why this should be as what is being proposed is that mood is to emotion as habits are to memories. Just as habits in contrast to memory are an inarticulate process, of which there is dim awareness rather than clear recall, so also we can expect mood

changes to be difficult to put in words. This difficulty in expression, it should be noted, does not arise because of conflicts about our image of ourselves of the kind that inhibit us from expressing our emotions.

Depressed subjects classically find it difficult to articulate their state. They know they feel out of joint and at odds with themselves but are usually unable to convey what the state feels like. This central difficulty is similar to that experienced by jet lag sufferers and those with shift work disturbances. These, however, are able to convey their state by reference to the experience they have been through. The same is true when it comes to articulating our experience of pain. We depend on being able to point to a wound, thereby getting across our meaning. When the pain is internal and not localisable, we classically have much greater difficulties.

If depression involves, at its core, something like the disorder outlined here, then it is an environmentally precipitated psycho sis rather than an environmentally precipitated neurosis. One of the many senses of the word "psychosis" is to indicate a disorder whose core symptoms result from an alteration beyond the normal range in an aspect of brain functioning. In this sense, depression, as outlined above, is both a psychosis and an illness. In this sense of the word, there is no implication that a psychosis is a more severe psychological disturbance than a neurosis. One does not have to infer any abnormality of brain functioning to account for the recurrent intrusive images and emotions, found in post-traumatic stress disorder or obsessive-compulsive disorder. But these neuroses in some cases lead to much greater distress than depression (fn-2).

THE DYNAMICS OF CONSCIOUSNESS

Disruptions of circadian rhythms will lead to an irruption of the unconscious into consciousness. The happens as things had been done automatically before will not now be done as efficiently. Things that had not to be thought about before, now have to be thought about. Unfortunately, while some problems can be sorted out by thinking, other things happen automatically or not at all (see cartoon). Thinking about automatic behaviours will, in general, only make the problem more salient without leading to a remedy. But as there is a problem, it will be impossible not to think about it. Thinking about such things as how to stay asleep or how to be interested in something will in turn feed through and decrease the amount of attention that can be paid to the kind of environmental demands that thinking can have an impact on. Having to cope with the kind of problems that thinking cannot solve reveals a great deal about the dynamics of consciousness.

Dynamic Psychology Reborn

In such situations, it seems we all behave like gamblers. We have hunches regarding what to "go with". We base our hunches on information to hand rather than on a rational assessment of the probabilities. We go by stereotypes, such as 3 and 7 are lucky numbers but 13 isn't. Despite this we often hang onto our hunches in the face of mounting evidence - sometimes increasingly firmly. Or if we change, we do so abruptly and discontinuously.

The study of such illogicality appropriately belongs to dynamic psychology. It seems that in situations of uncertainty we all bring "biased" strategies to the management of uncertainty. There is a sense in which talk of systematic biasing in the estimates we make is redolent of the claims of psychoanalysis. But what is involved in the management of uncertainty is a question of heuristics rather than one of defences. A method of handling incoming data rather than a method of avoiding home-truths. Our knowledge of such dynamics have arisen from studies of

the ways in which we all estimate probability rather than from studies in which a few analysed subjects handle their difficulties.

However, while illogical these heuristic strategies are not irrational. Perception also involves the construction of biased probability estimates. Thus, when faced with ambiguous pictures or scenes, we opt in just the same way for images of the obvious and familiar and are biased by things we have seen recently. This is dramatically clear when we fall in love and think we see our lover in passing strangers.

These heuristic strategies do not apply in jet lag or shift work as it is clear what has gone wrong and what the likely outcome will be. But depressed subjects, faced with a change in them selves and uncertainty regarding the outcome of the change, operate as all subjects do when called on to make judgements under uncertainty. Their opinions of what is happening them tend to the stereotypical. They are coloured by other things that have recent happened the subject. They also tend to anchor on particular views of what is wrong, in a manner that may not be easily shifted despite convincing evidence that the view is wrong.

In the case of depression, the stereotypes that best account for the available evidence are one's that emphasise personal failings. The rationale for this is roughly "I don't know what's wrong with me but I'm not up to par. All the available evidence is that I'm not able to pull my weight. People who do not pull their weight are useless worthless people. Therefore, I must be a useless worthless person".

This has a number of consequences. One is that coming to the conclusion that current poor performances indicate personal worthlessness will necessarily be demoralising. This demoralisation amplifies the original disturbance. At this point also subjects will begin to talk of personal worthlessness rather than just malaise or dysphoria, leading GPs to recognise the condition as a "psychological" problem. This produces the label of depression, with all the problems and expectations that this brings.

There are other options - such as "spiritual" outcome. Disturbances of rhythms can lead to a drying up of image flow, a sense of lethargy - that everything is a struggle. This accompanied by guilt and hopelessness gives a picture close to a dark night of the soul experience, where the spiritual pilgrim feels deserted by God and has no joy from living or no taste for life. Such an outcome is likely if the possibility that this is what is happening is available to the depressed person - if one of the common pool of stereotypes is that of the soul abandoned by God. Increasingly in our culture today, individuals are less likely to come to such conclusions but they must have been all but inevitable in many communities in the past.

The point behind raising these dynamics here is threefold. One is to indicate that this dynamic is likely to lead to the emergence of hysteria. A second point is that it produces a set of notable interpretative hazards. The third is that depression offers us a window on the operations of consciousness.

The Dynamics of Hysteria

I have argued that in attempting to account for changes in how we are functioning, we are liable to base our judgements on evidence readily available to us rather than wait until we have sought out all possible evidence. We are liable to be over-influenced by stereotypes. And we are also liable to anchor on some often inappropriate view of what is wrong us. This amounts

to saying that we are likely to become hysterical, as defined by Janet. He proposed that hysteria is a disorder in which subjects operate under the influence of fixed ideas that do not correspond with organic pathology.

Depressed subjects regularly override the evidence of what is actually physically wrong with them in favour of their idea of what is wrong. They are particularly liable to do this, as being depressed involves having a myriad of minor physical symptoms, such as a dry mouth, dry skin and hair, constipation, anorexia, insomnia, and anergia. The very fact that nothing is dramatically wrong is a hindrance to getting the answer right rather than a help, in that where something is grossly disturbed, the affected subject usually gets a much fuller data set on which to operate.

Such a dynamic can account, for example, for why a little old lady I saw recently who was clearly depressed claimed not that she was depressed but that she had a tumour of the throat. It was this that was making eating impossible for her. Closer examination revealed that she had indeed a dry throat and that eating was probably uncomfortable. It also revealed that she had a husband who died of a tumour of the throat, making tumours of the throat available to her in a way they would not be for the rest of us.

This kind of "inappropriate" clinical presentation is today termed abnormal illness behaviour rather than hysteria. However, as illness behaviour is behaviour that is as it were superimposed on a real illness, the notion of abnormal illness behaviour causes almost as much medical discomfort as that of hysteria. All too often abnormal illness behaviours seem to function to real illnesses as grins do to Cheshire cats - something that may unfortunately be left behind after the illness has gone.

In medical and surgical outpatient clinics, it is now recognised that abnormal illness behaviour gives rise to a greater amount of consultation time than does actual active pathology - as the examples of Da Costa's and Briquet's syndrome discussed in chap 6 illustrate. In psychiatry, however, grins without cats have the kind of insubstantial quality that we associate with ghosts in the mind's machine. They spook us. This creates a situation in which other doctors turn to the psychiatrist for advice on what they would think is a clear psychiatric problem - illness behaviour in the absence of an illness, only to find the psychiatrist frustratingly difficult to engage.

There is a further irony in that psychiatrists, in their efforts to make of manic-depression and schizophrenia real illnesses, have in recent exclusively biological hypothesis taken away the possibility of one of the features of all other medical illnesses - their halo of illness behaviours.

In addition to the "semi-hysteria" that is abnormal illness behaviour, it is common clinical experience that depressed patients may be frankly hysterical - in the sense of going off their feet, losing their memories or voices. Half of the cases cited in the preamble began in depression. This hysteria usually clears up when antidepressant treatments cure the underlying depression and thereby takes away the stimulus to the hysteria. (This rather than the crude idea of repatterning probably accounts for the usefulness of ECT in the war neuroses).

What applies to hysteria is also true for the other neuroses. If not somewhat hysterical, the depressed subject is highly likely to be phobic or obsessional. In general, all of these disorders

clear with effective treatment of the underlying depression, if the core disorder has not been too severe or allowed to persist for too long. In a proportion of all these cases, however, the neurosis will persist after the underlying disorder has cleared up, necessitating a further and specific intervention. This has not been a problem for the phobic and obsessional states since the introduction of effective behavioural methods. But it is a problem in cases of hysteria, particularly if there are social factors maintaining the hysterical position (see chapter 9).

Depression, therefore, can act directly as a trauma to initiate a neurosis. It can also, by lowering competence and generally increasing anxiety levels, make a neurotic response to what would have otherwise been relatively minor environmental problems more likely. In attempting to account for what is happening them, depressed subjects commonly come to the stereotypical conclusion that they must be useless worthless people. While the initial conclusion will be based on current poor levels of functioning, they will then trawl through their past for confirmatory evidence. In the nature of things they will find it. We all have shameful events of some sort, locked away - consciously repressed. These are liable to become the focus of attention and may be elaborated into events of major significance. This of course may lead to the impression that what is involved is a post-traumatic neurosis of some sort. The phenomenon of state-dependent memory, mentioned earlier, will tend to reinforce this. Many people, who become depressed for a second time, find the memories and pre-occupations they had during the first episode come flooding back, as though it were yesterday, even though it might have been decades before. At least part of basis for this seems to lie in the actual alterations in physical state brought about by the depressive episode.

The combined weight of these two factors is liable to create the impression of an unresolved post-traumatic neurosis, indeed a particularly "neurotic" neurosis, in that the subject will seemingly be caving in over quite minor issues. However, far from being weak-minded or degenerate, the individuals who, in my experience, are most likely to go down this path are those who have up to the onset of their depression been particularly go-getting or have had the highest standards for them selves. Often the problem lies in the determination to hunt down the psychological cause for what is not a psychological problem.

Rhythmicity is unconscious in the true sense of something that can only function unconsciously. It is not unconscious in the sense of something that is not available to consciousness through inattention or repression or that can potentially be brought into consciousness with training. When rhythms go wrong however the results do irrupt into consciousness. They enter in the way that a knock in the engine of your car or a sudden loss of power when you put your foot on the accelerator enters into consciousness. This is not another way for the car to work. This is the car not working. The **It** rather than a semi-personalised sexual **Id** has gone wrong.

Psychotherapies in general have advocated becoming aware of what one is not normally aware of, whether it be one's emotions or buried problems or neglected areas of one's psyche. However the unconsciousness that is buried in rhythmicity is not the source of more vital truths, it is not a repository of past repressions.

Coming face to face with one's inner working as in depression does not lead to an advance in self-knowledge, wisdom and does not guarantee health. Becoming aware of the wheels of one's brain turning ever more slowly or a drying up of image flow is no dark night of the soul.

Neither is getting better predicated on accepting some truths. Accordingly, the traditional role for insight is not operative in the psychotherapy for such a disorder.

The response of biological depression to cognitive therapy has had implications for one of the original tenets of cognitive therapy, which was that subjects who became depressed were some how being more illogical than the rest of us, as evidenced by their making incorrect inferences from everyday events. They are somehow psychologically degenerate compared to the normal. In contrast, the model of cognitive biasing outlined above, envisages the cognitive superstructure of depression arising by a process of normal irrationality acting on a subtle and difficult to interpret basic disorder.

But aside from disputes about why cognitive therapy might work, there is the nature of its practice, which will now concern us. In theory, subjects who are depressed come to their therapist and make statements such as "I am a useless worthless person", to which the appropriate response is to ask them for the evidence for this assertion, to get them to assess whether the evidence entirely supports the assertion, to help them to look around for any other ways to interpret the evidence or for other evidence that they have neglected and which when considered might provide the basis for a reinterpretation.

In practice what this means is that the subject provides the details of a scene that has happened recently, such as an encounter with a friend, that has caused them to feel bad. They might say for example that while they were there saying something, their friend seemed to be paying no heed to them. The first point to note here is that what is involved is a reading of an image in the mind's eye or a replay of some internal dialogue.

The second point regards what happens next, which is that the therapist is unlikely to ask for a cold assessment of probabilities, as to whether this really means that their friend thought they were not worth paying any heed to. Rather they will be asked to do two things. One is to give a much fuller context for the incident - to rewind their mind's eye reel and replay the scenes before and after the episode in question. The other is to get hold of the images that flashed through their mind when they became aware that their friend was paying no heed to them. The subject's conscious experience is often something like having a sideshow playing in parallel to the main performance and the job of the therapist is to get them to focus on what is happening in the sideshow - what the plot of that show is. Frequently, the sideshow will feature a performance in which the subject as central actor is standing in one spot with people circling round apparently oblivious to their existence. Or in which they may be left crying in one spot after everyone has left. These images will have flashed through the subject's mind, ordinarily almost unnoticed. These private images are not ones that subjects imagine are of importance in the process of negotiating with the outside world. But it would seem they are registered enough to cause a wave of sadness, anger or frustration to wash in on the deck of consciousness - apparently almost from nowhere.

The earlier discussion of heuristic strategies was somewhat abstract. The latter example brings home what actually happens. The stereotype of the useless, worthless person is not some paper fiction. Rather it becomes incarnate on the mental stage. Early in a depression, this interloper new to his role may be somewhat two dimensional but in due course he cloaks himself in the garments and gestures of past performances, until he becomes a player who "in a fiction, a dream of passion, could force his soul so to his whole conceit, that from her working all the visage wann'd; tears in his eyes, distraction in his aspect, a broken voice, and his whole

function suiting with forms to his conceit". A player capable of reducing many a Gilbert Ryle to the status of a rogue and peasant slave.

There is an important lesson here regarding the mechanisms that control entry into consciousness. The images that cognitive therapy deals with ordinarily are a mixture of truth and fantasy. A mixture of what has happened, what could have happened and what might yet happen - "if things keep going the way they are, I can literally see people ignoring me". In attempting to grapple with this, cognitive therapy aims at getting a full picture of what is going on in the mind of the subject but for the purposes of persuasion rather than in order to abreact some trauma. From the point of view of therapy, this points to the need to make different calculations on different occasions regarding the balance of truth and fantasy incorporated in mental imagery.

On a broader front, however, the evidence from depressed patients would appear to suggest that these heuristic strategies are not simply some biased calculation of probabilities but rather are intrinsic to the workings of, if not entirely constitutive of, the very mechanism that governs what enters consciousness. We don't consciously make calculations or balance probabilities. We have images of possibilities or of options.The calculations are done earlier and govern what images we see.

This is analogous to what happens when we perceive. Prior to perceiving, a range of stimuli are used as depth cues from which the probable sizes and distances from us of elements of the scene before us are judged. A considerable calculation of probabilities based on available cues, with undue weight being given certain representative features of the scene goes on, the outcome of which is a percept we anchor on.

If this is the case, it follows that consciousness is not a stage from which most of the important actors are missing. What enters consciousness is not the result of a compromise between defensive forces and unconscious instinctual drives. Rather the images that consciousness contains are models of current projects and their likely outcomes or future options. Consciousness anticipates the future rather than defends against the past. This is consistent with the findings of altered consciousness noted by Gregory in chapter 5 and also of the operations of the systems subserving vigilance and appetites outlined in chapter 7 and the circadian rhythm system in this.

There are a number of surprising things about cognitive therapy. One is that with its development, for the first time, a major psychotherapy has turned to a focussing on imagery in the management of psychological disorder. The other is that this therapy has been endorsed, pretty well unreservedly, by the medical establishment. These two issues will form the themes of the next chapter.

fn 1

During the 1950s a biorhythm model of behaviour with intersecting cognitive, emotional and vital rhythms and critical days at the points of intersection was proposed. A recent popularisation of this can be found in Thommen's **This is Your Day** (10). Many readers will have seen charts or calculators claiming to be able to decode what point on one's emotional, intellectual or physical cycle one is at. Most will realise that this is an amusing party game but no more.

In contrast to biorhythms, an acceptably scientific approach to the issues of rhythmicity only began with the establishment of the International Society for the study of Biological Rhythms in 1937. Because of confusion with Biorhythms, this society was renamed in 1971, the International Society for Chronobiology and the term circadian rhythm came into use to distinguish a rhythm with a sound empirical basis from a biorhythm.

fn-2

In this sense, depression would be a neurosis in the older pre-1895 use of this term - although one that is environmentally precipitated rather than the result of any degeneracy. Prominent recurrent intrusive imagery and emotions would in contrast, pre-1895, have qualified as a psychotic disorder. Confusingly, today, the term neurosis, at least in American psychiatry, is banned totally as a direct result of Freud's influence and psychosis is restricted to disorders which involve delusions and hallucinations. The confusion in these terms is brought out nicely, when one finds shift-work disturbances being referred to as a "pseudo-neurosis".

9 THE PASSIONS of the SOUL: their POLITICS and their MANAGMENT

All the things that the soul perceives by the mediation of the nerves may be represented to it by the haphazard course of the spirits ... [which can give] a picture that sometimes happens to be so similar to the thing it represents that one can thereby be deceived. But one cannot be deceived in the same manner in connection with the passions, inasmuch as they are so close and so internal to our soul that it is impossible that it should feel them without their being truly such as it feels them.

Descartes, Passions of the Soul: Article 26.

The subject matter of the eight chapters so far has been the issue images in the mind's eye or discourses on the mental stage and what these may reveal about our state of mind. Along with Descartes and Freud we have found reason to doubt the relation between these events and what happens or has happened in the 'real' world, although our conclusions about the consequences of this uncertainty differ to those of both Descartes and Freud.

The passions of the soul appeared for both Freud and Descartes to escape the taint of uncertainty. For Descartes, the immediacy of the experience could not sensibly be gainsaid. For Freud, whatever the cognitive uncertainties of analysis, there was an erotic undertow which provided the ultimate legitimation of psychoanalysis. The recourse to symbols that we have noted derived its validity from the almost tangible reality in analysis of what came to be called the transference emotions. These are emotions which develop in analysis. They supposedly derive from Oedipal or primal complexes and are 'transferred' on to the analyst.

While the phantasma of mental imagery have unnerved philosophers, the 'healer' has traditionally been charged with channelling the passions of the soul to the benefit of the individual and society. Success in this has traditionally been thought to involve an intuitive ability to plumb the erotic depths and discern there the movement of forces making for recovery or relapse. It was this intuitive ability that the analysts sought to bring into the scientific realm with their analysis of transference reactions. The history of the depth of psychotherapies since Freud has been a history of ever deeper plumbing of these depths. However, it is not clear that any bottom has ever been found against which soundings, of the kind that modern science demands, can be taken.

There has been a further problem in that the established scientific order has not appeared willing to support this exercise. It has appeared that implicit in the notion of the erotic is a potential subversion of the moral order. The analytic contention has roughly been that the established sciences do not wish to open this Pandora's box to find out whether this is the case or not.

It is not possible therefore simply to analyse consciousness and attempt to pinpoint the dynamics governing the entrances and exits on the stage of consciousness. The question of 'transference' between therapist and patient as well as the exchange between psychotherapy and orthodox medicine must also be faced.

Part of the mythology of psychoanalysis has been that Freud created dynamic psychotherapy de novo. Before him there was little but the mysticism of hypnosis. Since him there have been nothing but secessionists, who took their original inspiration from him but who for a variety of irrational reasons deserted the cause. The focal point of the mythology is that the history of psychotherapy really began with Freud's self-analysis and his discovery of the dynamic unconscious.

This view went unchallenged until 1970 with the publication of Ellenberger's "Discovery of the Unconscious", which almost single-handedly resurrected Mesmer and Janet. Since then, there have been an increasing number of revisionist views, which have led to an appreciation that there has been a wide variety of psychodynamic psychotherapies and that, far from deriving their source of inspiration from or in opposition to Freud, many of these have arisen quite independently of psychoanalysis. Many indeed have not concerned themselves with a dynamic unconscious at all.

If one therapy deserves to be seen as the stem therapy from which all other branches have grown, it has been hypnotherapy. Hypnosis was used by Janet and Breuer to treat patients with hysteria. Its use directly gave rise to the notion of a psychoneurosis and to modern psychotherapy. It was used by Freud but then later abandoned. Its power, it would seem from recent developments, even extends to the creation of personalities.

To try and bring out an alternative view of dynamic psychotherapy, I will focus on the history of the dynamic psychotherapies, from their common origin in hypnotherapy and attempt to pinpoint what is common to the various therapies - or rather the central point round which they all circle. Increasingly since 1980, it has seemed that this point centres on the issue of consciousness and in particular the images or monologues in consciousness and their interpretation, in the light of what has actually happened in an individual's life.

Interwoven with this is a political story. The story of the reception of psychotherapy by the scientific community. Not only has psychoanalysis been rejected but for the most part so have all other branches of psychotherapy, which would suggest that the reasons have not simply to do with what the scientific community fears may lie in its unconscious. This story has yet to run its full course.

Mesmerism

It has been conventional, since Ellenberger, to note that mesmerism (hypnosis) had antecedents in a variety of ancient practices and rituals. These include shamanism, exorcism, and rituals of healing through confession or re-enactment of precipitating traumata as well as a variety of magical practices such as voodoo. Textbooks list charismatic healers and mystics, such as Paracelsus, Gochenius, Fludd, von Helmont, Kirchner, Maxwell, Valentine Greatraks and Gassner. However, the various "therapies" listed above, while in some respects possessing similarities to some modern psychotherapeutic practices, differed critically in their world view from modern psychotherapies. The lack of a distinct notion of a psyche that could be disordered and a therapy specific to such disordering made this inevitable.

The first steps on the road to modernity were taken by Franz Anton Mesmer in the 1770s. Mesmer's initial method of treating patients was to sit in front of them trapping their knees between his and holding both their thumbs. He might then massage a patient in some part of their body depending on impressions that developed during his encounter with the patient.

This typically led to a crisis, which commonly involved a convulsive episode followed by a lethargic state. This seemingly brought about cures in convulsive disorders, blindness, paralysis and a host of other disorders.

This procedure differed little from what exorcists had been doing before him but in contrast to the exorcists, Mesmer saw the disturbances afflicting his patients not as possession by some spirit or as some loss of their soul but as a physical disturbance within them. The breakthrough came when he undertook to treat a Fraulein Osterlein, who was suffering from a profusion of physical complaints - probably quite like Anna O. Aware of current treatments using magnets, Mesmer got her to swallow water containing iron filings. He then had magnets placed around her and by means of these was able to cause something that felt like a fluid to move around within her. This proved therapeutic. Far from putting the success of the treatment down to the use of magnets, however, some aspect of the encounter led him to believe that there was a corresponding fluid in him and that it was the disposition of his fluid which, aided by the magnets, brought about a therapeutic realignment of hers. This fluid he termed animal magnetism.

He went on to conceive of the body as a system containing numerous small little magnetic dipoles and the entire system as one large magnet with one pole at the head and the other at the feet. Illness resulted from blockages to the flow of magnetic fluid through the body. Contact with the magnetism of Mesmer himself was designed to remove the blockage.

Mesmer left Vienna, where he had been practicing, for reasons that are not clear, and came to Paris in 1778. His practice grew so large so fast that he had to resort to a form of group therapy, with clients arranged around a large bath resembling the recently invented Leyden jar for storing electric charges, whose purpose was to store the magnetic fluid. The therapy room was curtained and dim and music played during sessions. Clients linked hands in a chain, which was supposed to facilitate conduction of the magnetism, and Mesmer moved among them, provoking crises. In an era of great enthusiasms, he became the rage.

He appears however to have been anxious to be more than simply the rage. He made several efforts to present his findings and theories to the respectable academic bodies of the day but was initially rejected. Finally in March 1784, a commission was established to investigate the validity of his claims. It consisted of the most famous scientists of the day, including Antoine Lavoisier, the discoverer of oxygen, Benjamin Franklin, Jean Bailly, Guillotin and others.

When the commission came to see the proceedings however Mesmer was out of town and they investigated instead the practice of a former colleague but then a competing magnetiser D'Eslon. Their conclusion was that whatever was happening, there was no mesmeric fluid. It had been claimed that crises could be provoked by contacting magnetised trees or drinking magnetised water. D'Eslon was asked to magnetise one of a number of glasses of water and one of a number of trees. Subjects, when then asked to drink some water or approach the trees, were thrown into crises but unfortunately by the wrong trees and the wrong glass of water. The commission's conclusion was that the phenomenon of animal magnetism consisted of the conjunction of the overheated imaginations of both the magnetisers and their patients. No attempt was made to assess the response rate of various disorders to being magnetised, even though there appears to have been a clear response rate.

In a secret report submitted to the academies it was also noted that there appeared to be a marked erotic element to the procedures. The crises usually involved a fluttering of the eyelids, shorter, quicker and shallower breathing, heaving of the chest and convulsive movements and was followed by a langorous state. What was this but orgasm? Typically, also the magnetiser was an older man and the magnetised were young and impressionable women.The possibility of sexual malpractices was thought to be highly likely.

Medicine and Magnetism

This verdict along with increasing dissent among his followers and what may have been an episode of depression led to Mesmer's withdrawal from Paris and to a decline in the movement there. But there is another side to the story that bears examination. As mentioned, the academy's secret report noted the dangers to public morality of the erotic charge generated by magnetic sessions. Although they had to spend a considerable amount of their time afterwards defending against this charge, the magnetisers were not it would seem unduly distressed by the problem. Their concern at least initially was with the politics of the report.

It was argued that the commissioners were seeking to suppress a popular movement aimed at benefitting mankind. What right did a group of commissioners have to decide on this question; should not the people decide? The doctrines of magnetism were almost identical with the medical doctrines of the time in proposing an imbalance of some vital fluid. The medical approach however sought to correct the imbalance by purging, bleeding, sweating or blistering. These procedures were generally carried out as a matter of principal without much regard to what we would now consider as the obvious physical state of the patient. The results of such processes were often to leave the patient worse off and to hasten death. In contrast magnetism could do little harm and often did great good.

Furthermore, while Mesmer himself charged great sums of money for his services, subsequent therapists often offered their services for free especially to the poor. This was also in marked contrast to medical practice. The philanthropic thrust of the magnetist movement can be deduced from the name that was given to the organisation that was set up to further magnetist values - the Society of Harmony. It can also be gauged from the fact that many of the initial members of the Society were later prominent movers in the French Revolution. Whether the commissioners were clearly aware of the revolutionary potential of magnetism or not, the early magnetisers argued that orthodox medicine was a political body whose interests coincided with those of the state. Why else would 12,000 copies of the report condemning magnetism be circulated free?

The Emergence of Hypnosis

As early as 1784, the Armand de Puységur, a follower of Mesmer, discovered that one of his farmhands, Victor could be magnetised without a crisis being provoked. He went, rather, into a deep trance resembling sleep but in which he could carry out instructions - an artificial somnambulism. The production of this state, rather than one of crises, came to be called mesmerising. After coming out of the trance, Victor was amnesic for what he had said and done during it but he could remember what had happened if re-mesmerised. He also appeared to be somewhat more lucid and even intelligent when mesmerised. Puységur felt that the state depended on the will of the mesmeriser as it did not seem to take as well if the mesmeriser didn't want to help his client. Where Mesmer had made despiritualised therapy, Puységur’s discovery marks the first hint that this kind of therapy might be neither a spiritual process or the

physical one conceived by Mesmer but rather something that would later be called psychotherapy.
Following Puységur, an increasing number of mesmerisers aimed at inducing somnambulism rather than crises. Subsequently, in 1813, the Abbé Faria argued that the mesmerised state was one of lucid sleep, in which subjects became increasingly susceptible. Where Puységur had thought that the state was induced by the will of the mesmeriser, Faria argued that there existed different degrees of susceptibility to being mesmerised and hence the condition must depend more on the subject than on the inducer.

In 1813, Deleuze put forward the idea that what was involved was fixed attention on a single idea. He also demonstrated the phenomenon of regression to childhood. Bertrand was able to produce hallucinations and negative hallucinations in the mesmerised state as well as what are now called post-hypnotic behaviours. Dupotet produced anaesthesia under mesmerism and pioneered its use for surgery. He also noted that while sensation might be reduced, perception could at the same time be heightened so that the subject might be anaesthetised but extraordinarily lucid. The idea of rapport began to develop. Observers noted there appeared to be a subtle interaction between the mesmeriser and their subject, a state of reciprocal influence. It seemed that the subjects became especially sensitive to subtle nuances on the part of the mesmeriser.

At the time interest in mesmerism in England appears to have been minimal. Its principal proponent was John Elliotson, who lost his place in the medical establishment as a consequence. A James Esdaille while in India found that operations could be conducted in the mesmerised state, which had better cure rates and a lesser degree of post-operative infection. The reception of their ideas led both to postulate a medical conspiracy against mesmerism.

In 1841, Elliotson invited the French mesmerist Lafontaine to tour England. On tour he was seen by James Braid, who attended as a skeptical observer but came away convinced there must be something to the phenomenon. Braid was effectively the first to tackle the issues raised by mesmerism in a systematic fashion. He noted that susceptibility varied in the population. He proposed that the condition was similar to the state that affects animals exposed to danger where they can become frozen in apparent fascination before a predator. (This use of the term fascination underlies the current use of the term to be mesmerised - which connotes a state of fascination). In an effort to break with the unsavoury associations that mesmerism had by 1845, Braid proposed naming the process hypnosis, in recognition of its affinities with the sleeping state.

He thought that fixity of gaze was essential to the induction of these states, until it was found that blind men could be hypnotised. This led to a shift in thinking and the proposal that what is involved is exclusive concentration on one idea. Just as the optic nerve fatigues when a subject stares fixedly at one thing, so also the will might fatigue through the effort of sustaining attention, and might collapse to yield the passivity of hypnosis.

He also noted that frequently on falling into this state, in contrast to the relaxation of sleep, subjects were somewhat rigid or fixed in position. This was termed catalepsy. It was a state that apparently could be sustained without fatigue. Regarding the ease with which hypnotic states could be induced in groups, he pointed to the phenomenon of empathy and emotional contagion. When one person in room starts yawning so too do the others. This, Braid noted, could even extend to the dog lying on the floor.

This empathy combined with the fact that ideas can bring about behaviours without much conscious intervening, for example thinking about food produces salivation or the thought of a child can produce lactation in a nursing mother, led to the notion that the hypnotic state involved expectations. Such expectations might, he thought, act through the recently discovered reflexes, whereby it had been shown that actions could be stimulated in a manner that bypassed conscious awareness and willing.

Medicine & Parapsychology

From about 1840, mesmerism began to find a niche for itself in parapsychology. Mesmer had, from the start, claimed that being magnetised liberated a sixth sense. It was noted also that some subjects on going into trances apparently had visions. Other subjects seemingly became able to see their own insides and to diagnose complaints they might have, as well as predict when their disorders would clear up - a potentially illegal practice of medicine. Surgery under hypnosis implied that almost anyone could claim a place in the newly developing operating theatres - something the medical profession was never likely to tolerate.

These phenomena were expanded into regular visionary seances and clairvoyancy. In Germany it led to the social phenomenon of seers and seeresses of which Katharina Emmerich and Friedericke Hauffe were the most notable. In the USA it led two clients of the mesmeriser Phineas Quimb, Mary Baker Eddy and Andrew Jackson Davis, to establish the Christian Scientists and the Church of Latter Day Saints respectively.

A further happening was the apparent possession in 1845 of the Fox home by spirits of former residents. A communication was set up with these spirits by Mrs Fox and her daughters, at first hesitantly and by knocking and later with greater facility and more publicly in the form of seances. Seances brought to light the existence of subjects particularly able to contact spirits - mediums. It also brought about techniques such as automatic writing and crystal gazing. The phenomenon of age regression was put to use following the demonstration by De Rochas that subjects could be regressed through birth to former lives. This was taken not as an intended reductio ad absurdam, but rather as evidence in favour of reincarnation and the transmigration of spirits.

All of these techniques were later used by Janet, James and Prince in the exploration of consciousness. Needless to say, they also provided material for the proponents of scientific orthodoxy to damn the entire enterprise. A damnation, it perhaps should be noted, in which both scientific and clerical orthodoxy lined up on the same side.

FROM HYPNOTHERAPY to PSYCHOTHERAPY

During this period, successive applications to the Academy of Sciences for official recognition of hypnosis met with rejection. Ellenberger suggests these rejections were inevitable as the submissions invariably attempted to demonstrate the scientific validity of phenomena such as foreseeing the future. Given the scientific rejection of hypnosis by the establishment in 1784 and again in 1837 and its virtual proscription between 1784 and 1880, it can be appreciated that the efforts of Charcot in the 1870s to place hypnosis once again on the scientific agenda involved considerable risk to his career. That he succeeded is a testimony to his standing and the force of the arguments he used.

After taking up a position in Paris' Salpêtrière hospital in 1862, Charcot set about methodically working his way through the clinical conditions to be found there. His method was to look for ideal types from which others might deviate on details, while preserving a common core. This involved immersing himself in the material and waiting until an impression took hold of him. This was then followed through to see if the impression of a condition he had had could be fitted to the material, so that certain patients would conform to it more or less. In this manner he discovered multiple sclerosis, amyotrophic lateral sclerosis, locomotor ataxia which gave rise to Charcot's joints, as well as both renal and respiratory disorders.

Taking the approach of attempting to find a core group of signs to the question of hysteria, he characterised it as an illness involving a crisis, which had four stages, epileptoid, violent movement, hallucinations and finally confusion. In addition, it typically involved anaesthesia, when the patient might be otherwise normal. He took exactly the same approach to hypnosis in 1878. Taking several unequivocal cases of hysteria, he noted that, when hypnotised, they went into a trance through the stages of lethargy, catalepsy and somnambulism. It was this orderly progression of observable stages, he argued, that provided the basis for a scientific investigation of the phenomenon of hypnosis. The medical establishment agreed.

Given the licence to investigate the matter further, in an extraordinary spell during the 1880's the best minds of the Salpêtrière, including many researchers from overseas, pursued the elusive nature of hypnosis. Within a short period, they were recording observable changes in sensory thresholds. They were also transferring anaesthesia around the body by means of metals and from one body to another. They were splitting minds and inducing emotional states in response to the presentation of various colours.

Perhaps the most important discovery to stem from work on the nature of hypnosis was Charcot's discovery of the traumatic neuroses. Following exposure to shocks, subjects it would seem might be paralysed, struck dumb or lose their memory. Until Charcot investigated these states, it was assumed that the disorders that affected such subjects did not differ from other aphasias, paralyses or memory disturbances. But he was able to show that, under hypnosis, such subjects could often recover their lost functions. And that hypnotised subjects, told that they had lost the use of an arm or leg, would display a paralysis of the type found in subjects whose disorders came on after trauma. Under hypnosis, patients with post-traumatic amnesia could recount what had happened to them during the period of apparent amnesia. Treatment of post-traumatic disorders then became a matter of hypnotic abreaction. Charcot was working on this problem during 1884 and 1885, when Freud came to Paris on a scholarship.

Despite, the "psychological" nature of the phenomena under investigation and the precipitation of some of them by trauma and their subsequent cure by abreaction, hypnotherapy remained for Charcot essentially a physical treatment, although he began to reconsider his position after 1890. What was involved was the mobilisation of a degenerate reflex, which determined any apparent psychological phenomena according to the laws of association psychology.

Bernheim and Psychotherapy

While most observers who came to learn were impressed with the quality of the scientific work, a number were not. Delboeuf from Belgium thought that all that was involved was expectant attention. Bernheim from Nancy found that he could not produce any of the phenomena being demonstrated by the Salpêtrière, unless the subject had some inkling of what was required of them. Once they had, the Salpêtrière signs could be produced effortlessly.

The Nancy school of hypnosis, in contrast to that of Charcot originated with the practice of a country doctor called Liébault. Unlike the Parisians, he had never given up mesmerism and indeed claimed to have learned all he knew from travelling mesmerists, who were at the same time being denounced by the establishment as being irresponsible mountebanks and quacks. Their techniques, he found could be usefully applied to medical disorders. This led him to give up orthodox medicine and to concentrate solely on hypnotising his patients and suggesting to them under hypnosis that their illness would clear up.

Bernheim who was then professor of Medicine at the nearby university of Nancy came in 1882 to observe Liébault's practice and was convinced that there was something to it. In collaboration with Liébault, he attempted to refine the principles of what happened. In the first place, Liébault seemed to have no great inductive procedure but rather merely suggested the idea of sleep to his clients. Hypnosis however often appeared to take whether or not the subject closed their eyes. Even with their eyes open and apparently unaffected suggested cures were sometimes brought about. This led to the isolation of suggestion as the key component of the hypnotic process.

Liébault's method of induction and therapy was it seems one of imperative suggestion - it was simply suggested to the subject that whatever ailment they had would clear up. Bernheim evolved to a position of persuasion. Seeing a patient over several sessions, their recovery would be negotiated. This he was later to claim was the first explicit "psychotherapy". A claim made in spite of the abreactive nature of Charcot's handling of traumatic neuroses. For Charcot, as we have mentioned, hypnosis was an experimental neurosis. For Bernheim it was an experimental psychosis.

To appreciate what Liébault and Bernheim were up to, it is useful to consider the question in terms of imagery. In essence, Liébault conjured up an image of the patient as well and simply insisted on this vision. Bernheim, in contrast appears to have spent time getting to know his patient and then persuading them that the image he had of them corresponded with what was possible for them. We can surmise that in so far as these images took hold in patients' imagination, and in so far as their illnesses were psychologically remediable, they got better. The method of ensuring that the desired image took root differed. Bernheim's emphasis on persuasion bears resemblances to the modern practice of cognitive therapy, where patients are encouraged to grasp images that may flit through their mind's eye and actively manipulate such images to see whether other scenarios are possible - and indeed it has been suggested that cognitive therapy is a direct descendant of Bernheim's methods.

The Nancy school triumphed over that of the Salpêtrière. Why is not clear. In part perhaps simply because Bernheim outlived Charcot, who died in 1893. Following Charcot's death and the reaction of outside observers to the more exotic of the Salpêtrière findings, many of his more notable disciples switched camps and ridiculed the notion that there might be anything more to hypnosis than persuasion. It became clear also that many of the less exotic findings had been manufactured or had depended on Charcot's methods, which involved taking cases characteristic of a state. This meant, in the case of hypnosis, using several gifted hysterics and ignoring as a consequence the more subtle states that were and are the norm for hypnosis. Bernheim, in contrast, based his ideas on seeing hundreds of clients hypnotised.

Medicine and Hypnosis

But another factor lay in the reaction of orthodox medicine to these developments, a reaction swept away both Charcot and Bernheim, with Bernheim's victory being more a matter of not being quite so completely obliterated.

As well as the scientific rejection of mesmerism before Charcot, there was a rejection based on the continuing identity between mesmerists and the forces of social reform. One implication drawn from mesmerism was the entire social order itself was to some extent suggested. That the reason the poor were so poor was not any nervous degeneracy but rather the inertial weight of the social system. There were close links in particular between the mesmerists and the emerging anarchists.

The mesmerists also managed to fall foul of organised religion. Spiritism was obviously a problem. But even more so was the finding that under hypnosis a number of subjects had what appeared to be visionary ecstatics. Also found were the production of stigmata of various sorts. This could range from the seemingly mundane production of blisters under hypnosis to full scale stigmata of the crucifixion and passion of Christ. That such phenomena are not impossible is suggested by the case of Steven in the preamble. Such findings had unsettling implications for the assessment of the lives of many saints. Janet, in particular, fell foul of the Catholic Church on this matter.

Many of these tensions crystallised in 1892 with a trial with notable similarities to that of Kenneth Bianchi, the Hillside Strangler (chapter 4). This was the trial for murder of a Paris prostitute, Gabrielle Bompard. She had been an accomplice to the murder of a bailiff by her boyfriend Michel Eyraud. She pleaded innocence, claiming that she had been under Eyraud's hypnotic influence when the crime took place. This murder of a lowly functionary by a prostitute and common thief captured the front pages of French newspapers for several months indicating that the issues were more profound than might have appeared on the surface.

During the trial the dangers of hypnosis were aired. It was claimed that unscrupulous practice could lead to shady practitioners assaulting young women, who were referred to them for minor medical matters requiring hypnotic anaesthesia. It was also thought there was a risk of male servants or travelling salesmen hypnotically influencing bourgeois housewives and having their way with them thereafter. Such rapes unlike others would also conveniently be accompanied by post-hypnotic amnesia. A number of cases were cited of women who had seemingly inexplicably left their husbands and whose infidelities were put down to hypnotic influences.

In their own ways both the teachings of Charcot and Bernheim were the cause of concern. For Charcot only a latent hysteric could be hypnotised. The use of hypnosis on such a latent condition would enhance the tendency to degeneration, leading to increases in the strength of automatic urges and bestial tendencies - which could then be inherited. For Bernheim, Bompard could have committed the crime while under hypnotic influence. He also suggested that the effects of hypnosis could be likened to crowd psychology. As France had only a few years beforehand had the experience of the Paris commune and then later that of a former army general, Boulanger, setting himself up as a latter-day Napoleon, riding around the provinces on horseback and being greeted with adulation as he went, this was a politically sensitive comparison.

The significant upshot of the trial was that the legal practice of hypnosis was restricted to the medical profession. The practical lessons drawn from the trial were that women should not travel alone. They also should not stare at strangers.

The rather obvious point to make here is that it was almost certainly vastly more common for middle and upper class men to be responsible for the rape of working class or servant girls than for working class men to have their wicked ways with the flower of bourgeois femininity. There is a curious irony here in that in the course of a few years hypnosis was rejected doubly. Once as a possible socially undermining force that might corrupt morals. But also because it revealed significant moral corruption by leading to the unearthing of evidence pointing to the widespread existence and damaging effects of incest and child abuse. In both cases it was rejected by members of the class, sex and age group, who were likely to have been most responsible for the abuses in question.

There is a further irony. One might have imagined that the demonstration of the possibility of surgery under hypnosis by Esdaille and others would have been embraced by the medical profession. It wasn't. Part of the reason for this probably had to do with the introduction of chloroform in 1845. This and subsequently nitrous oxide were embraced whole-heartedly by the medical profession. The occasional scandals of sexual interference with patients while under anaesthesia were either not believed or else simply had little impact. The fact that orthodox anaesthesia was a more dangerous enterprise than patients were ever aware of, with a considerable number of fatalities, did not detract from its adoption. Histories to this day eulogise the discovery of anaesthetics, the agents of therapeutic sleep. Little or no regard is paid to side effects or to scandals surrounding their use.

FREUD and TRANSFERENCE

The erotic possibilities of the special rapport between magnetiser and magnetised had been noted from the start but it still came as a considerable surprise, it would seem, to both Breuer and Freud when they were faced with the issues in the flesh. Freud went on to develop out of this his notion of transference, which in turn was used as evidence in favour of the validity of psychoanalysis.

His initial practice of hypnosis was very much in Liébault’s mould with imperative suggestions being offered patients. It seems reading his case histories that every possible memory from the past that could cause any distress was summoned up and dismissed, in a manner that now seems very superficial. Although he declared that he gave up hypnosis, around 1893, he was still using the technique of imperative suggestions late into 1896.

As he began to move towards a traumatic model of hysteria, he needed something more in the line of abreaction to unearth pathogenic memories. This he took from Charcot. But unlike the accidents that lay behind Charcot's traumatic neuroses, the events he was pursuing were one's that involved shame or guilt, which no-one would particularly want to remember. This gave rise therefore to a defence against the memory. The amount of resistance the patient put up to recalling a memory became an indicator of the force with which it had been repressed.

As regards where the memory had been "sent", he found time and again that it was in consciousness but couldn't easily be got hold of. This led to the procedure of placing his hands on the patient’s forehead, when it came to asking them to remember things they appeared to have difficulty with, and instructing them to say the first thing that came into their mind. The

length of time between seeing the image, which he could see them seeing and the time they took to tell him what it was they saw, was he suspected a good indication of their resistance. The greater the time, the more they rearranged what it was they saw or the resistance to saying what it was that they saw.

This was often borne out by his finding that when he finally presented patients with something he thought was on their mind, or some episode from their past that they seemingly could not remember, they often wondered what the fuss was all about as they were always able to remember the scene or think the thoughts he had just told them. This pointed, he felt, to a split between the traumatic memory and the emotion that should go with it. A split that sometimes showed itself when a patient, in response to the request to talk about whatever came to mind, found that some apparently trivial detail surfaced. This trivial detail frequently turned out to be a piece of the buried trauma. Its trivial nature and unemotional quality pointed, he argued, to the success of the defence taken.

The therapeutic problem therefore was transformed. It was not simply one of extirpating a foreign body but rather one of melting a resistance. To do this the physician had to create the motives that would overcome the motive force of the resistance. If the patient was going to give up their resistance, there had to be some substitute. One motive could be simply the appeal of becoming like the physician, who took part in the process as a representative of a freer state. Another could be the possibility of playing a new "game". Once the patient got the hang of solving riddles by reading their own text, some of them could be expected to pursue further solutions out of interest.

The Discovery of Transference

A third, and by far the most important compensation, was some form of love. The importance of this was such that difficulties in the analysis tended to go hand in hand with difficulties in the relationship between patient and therapist. Thus, if the patient appeared to resist remembering, it was often as much if not more because of her feelings toward the therapist as it was because of any difficulties in the material to be remembered. She might be feeling neglected, or insufficiently appreciated or worried if the material to be presented would cause her therapist to lose interest in her. Another problem came from the patient being concerned at becoming too dependent on the therapist - too much in love with them.

A particularly important complicating factor arose from the patient transferring ideas or emotions arising from the analysis onto the therapist. This insight came about after a patient declared her passion for Freud. Subsequently, in analysis, she remembered another man and a scene where she was talking to him, while wishing that he would take the initiative and sweep her up into his arms. This Freud interpreted in terms of the analysis bringing this feeling back to the surface before it revealed its historical context, thereby leading to the lady in question transferring these emotions onto Freud himself.

From this kind of incident, if not this one in particular, he went on to postulate that the relationship between the analyst and the therapist mirrors the past. That present distress or ambiguity in the therapeutic relationship mirrors past distress and ambiguity in some other relationship. The problem was one and could be overcome in the present or the past. Reminiscence was not the only necessary way forward. A re-integration could be approached by looking at how things were or were not fitting together now rather than just looking for how they had fallen apart in the past.

This is a claim that most schools of psychotherapy would probably accept. However, in post-1896 Freudian hands became a means of escaping from present awareness. Just as with the analytic recourse to symbols, the interpretation of transference became a means of aborting the process of fully exploring the present contents of consciousness in favour of the explanation of certain aspects of present consciousness in terms of past events. It subverted the claims of the present by a recourse to past determinants.

It is at this point that gestalt and encounter therapies diverge from the depth psychologies. Seeing how the now fits together in preference to analysing the past became their therapeutic method. For both these forms of therapy, present feelings and present erotic tensions are taken to derive very much from present situations. A focus on the past is seen as just one more attempt to evade an encounter with the present. Therapy is a process of encouraging the individual to get hold of the images or awareness that flit momentarily through consciousness. Ordinarily these may seem so transient or evanescent they are assumed perhaps not to be of much significance and hence are not taken into account. Oftentimes, however, they may be at odds with conventions, habits or routines and hence it becomes a matter of strategic convenience not to pay much heed to them. Why this might be effective is discussed in more detail below.

Transference and Hypnosis

Deep emotional rapport and therapy by negotiation were all integral aspects of hypnotherapy, as practised by Janet. It is not clear that Freud had done anymore in 1896 than to abandon Liébault's method. However, with the collapse of the seduction theory of hysteria, the need for an abreactive form of hypnotherapy also vanished. The subsequent development of psychoanalysis was to put a very particular construction on the past events that determined present feelings in the therapeutic encounter.

With the general discrediting of hypnosis after 1895, psychoanalysts almost of necessity had to claim that they practiced something more rational and scientific than hypnosis. The triumph of psychoanalysis in turn cemented the demise of hypnosis - apart from its use for abreaction during the world wars. Far from asking whether analysis was just another modified form of hypnosis, the central issue after World War 1 became one of explaining in analytic terms what happens in hypnosis.

Concepts such as regression were put forward to account for the findings of hypnosis. The "delightful" sense of fatigue found in hypnosis was taken to indicate its truly libidinal quality as were the fears and fantasies that most people have about hypnosis. To the hypnotist, as opposed to the psychoanalyst, were ascribed unconscious wishes for magical power and sexual domination. Ernest Jones saw hypnosis as a narcissistic state in which all the critical faculties of the superego were suspended.

Freud argued that hypnosis facilitated a patient's concentration of attention on the therapist in a way that led to the rapid development of transference reactions but that the inability to work through these were the drawback to the state. It was therefore the analysis of transference and its analysis in terms of an invariable primal template that differentiated psychoanalysis from hypnotherapy. But does it?

In analytic therapy attention is focussed on specific material. External stimuli and material are progressively excluded - just as happens in a hypnotic induction procedure. The process of free association may be a slow way to build up expectancies but it is also a rather certain way to do so if the therapist is always going to interpret the material in terms of fixed ground rules. There is the further ambiguity in that the love of this wonderful therapist, whose suggestions cannot be wrong, depend to an unknown extent on my coming up with the right kind of material. This is a powerful incentive to the forms of reciprocal sensitivity found in hypnosis.

Freud was later to tie down transference emotions to emotions appropriate to the Oedipal period, that seemingly had the analyst as their object. But all the ambiguities of analysis and of hypnosis itself come to the fore here. As it becomes clear to a patient that "Oedipal" material is required, so it seems Oedipal material is forthcoming - in a way that it is not in Jungian or other therapies. Patients may even in therapy sessions begin to act childishly. Is this not a hypnotic age regression?

The issue is made more complicated rather than solved by the question of transference. Transference, in its strictest psychoanalytic sense, consists of feelings toward the therapist specific to therapy, which if the therapy is psychoanalysis supposedly reflect primal emotions for parental figures. But are these inter-individual or ecological? Do they reflect the feelings that arise from a true appreciation of either a parent or a therapist apart from their role or are they part of the ecology of childhood?

For example, in childhood one is fearful and respectful toward all authority figures. As the number of authority figures diminish later in life so too these feelings and submissive attitudes diminish. They may only resurface when called in to see the head of department or the bank manager, when powerful feelings established first in childhood may erupt. Or when faced with a moody therapist. But is this what Freud meant? If so, psychoanalysis reduces itself to a form of behaviourism, where present behaviour is dominated by habits established earlier.

Or did he mean feelings for the person of the parent rather than their role? If so, is it really possible for a child to reliably differentiate feelings for the person of their father from feelings created by his role? And if that is possible, will the adult they later become reliably be able to recapture the particular differentiations made by the child. This recapturing will have to take place in the context of also trying to differentiate these childhood feelings from feelings for the person of the analyst and feelings peculiar to the roles of therapist and patient? It will also have to take place against a background of the analyst almost certainly insisting on collapsing these various differentiations.

Medicine & the Depth Psychologies

It is not my concern to detail the medical reaction to psychoanalysis, which analysts since Freud have been at pains to point out has been astonishingly vituperative. After Freud’s death much of the practice of early post-War “modern psychiatry” was predicated on a profound opposition to psychoanalysis. This opposition, like the Western "capitalist" reaction to "communism" gladly embraced a policy of mutually assured destruction, with patients unfortunately being the losers.

The arguments have centred on the scientific credibility of psychoanalysis and this book argues that psychoanalysis is radically flawed in this regard. But it is not clear that the opposition can simply be explained in terms of a debate about scientific matters. Rather there

has been a political and social agenda to psychoanalysis, which has, I would argue, aroused more opposition from both the medical and social establishments than the actual details of analytic practice or its scientific procedures. Freud was quite clear on this. As he saw it, the proper acceptance of and adoption of psychoanalysis would lead to radical changes in society.

While resisted on the level of scientific orthodoxy, the depth psychologies, and psychoanalysis in particular, were adopted on another. In many circles, "analysis" of one sort or another replaced religion in the second half of the 20th century. We are living as Phillip Rieff has put it through "the triumph of the therapeutic". William Barrett has claimed that with the death of the soul, analysts and other depth psychologists have replaced philosophers as the arbiters of what is important in human affairs. The examples of mesmerism and psychoanalysis suggest that an occupational hazard of psychodynamic psychotherapies has been that their founders or key proponents develop messianic tendencies.

Jungian Psychotherapy

At first blush, Jungian psychotherapy would seem neither to have fallen foul of the establishment in quite the same way as psychoanalysis or to have within it comparable material for offence. In safe contrast to Freud, who claimed to have read a dark and brutal message in the unconscious, Jung found religion and God. Out of the unconscious in dreams seemingly arose archetypal images common to all cultures and all times suggesting a transcendent reality and a religious base to human striving. Where Freud found incestuous sexual fantasies and impulses, Jung found the almost desexualised anima and went on to proclaim the psychological importance of the Catholic Church's recognition of the Immaculate Conception. Where Freud saw in war a proof of his thesis about humanity, Jung saw in chivalry many of the eternal concerns of mankind.

Perhaps the first question to ask is whether the Jungian message can be said in any proper sense to derive from an unconscious. While I have argued that the psychoanalytic reading of what the unconscious contains is radically flawed at least it makes intuitive sense to say that in some sense it does contain sexual impulses. In contrast the symbols and motifs of Jungian therapy have more to do with the kind of material found after taking consciousness expanding drugs, such as LSD and ketamine.

From the start, Jung was seen as the depth psychologist, whose writings were most in sympathy with findings from the use of these drugs. He is seen as the 20th century's most representative shaman. Accordingly, I am going to take the unorthodox step of discussing the psychedelic movement as a branch of Jungian therapy, in order to pinpoint more clearly the role of consciousness in Jung and to indicate that the revolutionary potential of and reaction to this line of thought is equal to that of psychoanalysis.

The story of these agents and reactions to them touches on all of the points raised earlier in discussing mesmerism. Just as mesmerism traces its origins to the trance-like states induced by ancient rituals, so also the psychedelic story arises from the use of drugs by various peoples throughout history for the purposes of expanding consciousness or inducing trances. The use of these drugs was brought to Western attention in the 19th century by the members of the Parisian Club des Hachichis, who included Baudelaire and Gautier. William James in his *Varieties of Religious Experience* came out in favour of there being a possible overlap between the states induced by these drugs and certain mystical experiences (36).

This story developed in pace and complexity with the discovery of LSD and subsequently other compounds. In 1957, Humphrey Osmond coined the term psychedelic (mind-manifesting) to convey some idea of the effects of this class of drugs of which LSD had become the prototype. He also laid down the marker that these drugs were of "more than medical significance". At the same time Aldous Huxley's The Doors of Perception & Heaven and Hell was leading to an awareness of and interest in the new class of compounds.

The properties of the psychedelic drugs have proved as difficult to pin down as those of hypnosis. It seems that one of LSD effects is to induce a state of suggestibility. The effects that are produced depend to some extent on the setting in which the drug is taken. With the right setting, dim lights and music and the company of others, the experiences may be profound. The subject may find buried material from their past life re-emerge into consciousness. In some cases, subjects seem to relive rather than simply remember past episodes, especially past traumata. Sometimes this will involve reliving their birth. In other cases, the experience may be of being one with the universe. This can involve seemingly dissolving into the material of the universe or appreciating some overall harmony. In yet other cases subjects may have a transpersonal experience, in which they seemingly become someone else from some other time and place or in which they may even become an animal.

In a laboratory setting with sober investigators the effects primarily involve sensory distortion. This became clear in the course of military research on the possible use of LSD in drinking water to disorient civilian populations. When taken by sober scientists in research settings, the predominant finding was nausea and perceptual instability.

The dependence of the effects on the setting led a number of academic investigators during the 1960s, most notably Timothy Leary, to advocate that LSD should be taken in private among friends, as its taking was as much a religious event as a scientific one. The experiences and their significance were held to overlap with the mysticism of many oriental religions. The *Tibetan Book of the Dead*, in particular, became the gospel of the psychedelic movement. The taking of psychedelics was seen by many as a time-saving and relatively effortless way to achieve the effects that several years of hard work at yoga brought about.

Of note here is that the effects of setting and the "consciousness expanding" effects produced are almost identical to the setting used by Mesmer and the later spiritism that mesmerism gave rise to. The similarities between the psychedelic movement and mesmerism extended also to the political sphere.

A number of communes set up around the use of these drugs, the members of which advocated peace, love and a dropping out of conventional society and its rat race. It is almost impossible to evaluate these communes as they quickly attracted the disaffected and casualties of American society, whose entry brought an increase in crime and lawlessness. But one consequence of the late 1960s hippie culture stemmed from the enormous popular influence of some of those who used psychedelic drugs. This influence almost certainly had an effect on the course of the Vietnam War.

A reaction to the use of the psychedelics set in. Although there are few well-documented cases of adverse reactions to LSD and although they had been used widely by clinicians, even in physically debilitated populations, without ill effects in a manner that suggested that they were at least physically benign, a number of scare stories began to circulate. It was claimed that

LSD caused damage to chromosomes and that the offspring of takers would be likely as a consequence to be handicapped or might even be monsters (shades of degeneracy theory updated). There is no evidence that this is the case. A story also circulated that users of LSD might be attracted to look at the sun, while on the drug and might be unable to look away, which would lead to blindness. Other stories related how users jumped to their death from the upper floors of buildings. The psychedelics were also grouped with the opiates, as narcotics, although they produce neither physical nor psychological dependence.

In 1966, severe legal restrictions were placed on their use or on research into their effects. Their demise came swiftly thereafter. A demise that echoed the orthodox medical approach to mesmerism. The psychedelics have seemingly been obliterated. One searches in vain in even the most comprehensive of orthodox textbooks of psychiatry for a section on the psychedelic drugs, just as one does for a section on hypnosis, even though these quite remarkable agents should be of great interest to workers in the mental health field. It is difficult to find anything on the psychedelics or their effects in medical libraries. At best one can find parapsychology texts on consciousness which might include chapters on these psychoactive drugs.

THE REDISCOVERY OF TRANCE

While these cultural battles raged, a more experimental approach to hypnosis came to the fore, in which two schools of thought have been pitted against each other. One has been behaviourally oriented and has argued that there is nothing to hypnosis but a state in which one person attempts to meet the perceived wishes of another - if necessary, by outright simulation. Theodore Barber has been a leading exponent of this school and more lately Nicholas Spanos. The other school of thought has argued that hypnosis brings about distinctive psychological changes. Its best-known representatives have been Ernest Hilgard and Martin Orne.

The question has been pursued in the laboratory rather than in psychiatric clinics. One consequence of this is that the link between hysteria and hypnosis has been severed. The laboratory subjects have been typically young and healthy college students. Many of these have proved far more readily hypnotised than patients labelled hysterical.

A further finding has been that there are no improvements in mental performance when the subject is in hypnosis. The significance of this it two-fold. One is there has been an impression that hypnotised subjects can more intelligent or somehow in touch with other truths and this has supported the political or messianic agenda of mesmerism. The other is that therapists from Breuer and Freud to today have been impressed with the astonishing detail of their subjects' reminiscences. This has regularly been put forward as one argument in favour of the veracity of the accounts of trauma they elicited. But when put to the test, hypnotised subjects asked to remember the number plates of cars involved in crimes do no better than non-hypnotised subjects, even though they may be subjectively sure that they are doing well. They may even seem to be reading the number plate in their mind's eye.

Proponents of the theory that there is a neuropsychological change specific to hypnosis point to phenomena such as trance logic and hidden observers. Trance logic is where hypnotised subjects are asked to look at the experimenter, close their eyes while the experimenter, unknown to them, leaves and then are instructed to open their eyes and see the experimenter - they do. But when asked to describe what they see, many see the experimenter but see him as transparent. Subjects who are simulating hypnosis do not spontaneously report such

transparent images. Trance logic is also shown when age "regressed" subjects use words that they could not have possibly known when they were at the age in question or when subjects, who are told they cannot see something in a room, agree but nevertheless walk around it rather than through it.

The hidden observer phenomenon was described first by Hilgard. What happens is that a subject, made analgesic under hypnosis, is asked if there is some part of them registering pain. They seem able at one and the same time to demonstrate apparent analgesia and to report on the quality, intensity, and location of the pain. This dissociation led to Hilgard formulating what has become known as the neo-dissociationist theory of hypnosis.

Against such findings Spanos and others have produced a considerable amount of evidence that there is nothing that happens in hypnosis that cannot be simulated by well-motivated subjects who are not hypnotised. He has shown that using coping strategies, such as focussing attention on unrelated imagery, can lead normal subjects to tolerate many of the pains that are supposedly the hallmark of hypnotic analgesia.

Spanos has also argued that there is a "social" reason why some subjects are not hypnotisable - that it has to do with ambiguities in the instructions they receive rather than because they lack any special brain reflex. Thus, when told that amnesia will set in under hypnosis, the instruction may be taken to mean that the memory in question will just vanish or that the subject will pay less heed to it. It seems that those who interpret it to mean that the memory vanishes do poorly, whereas those who take the instruction to mean that they should direct attention away from something that they will nevertheless be at least partly aware of, do well. The same holds for hypnotic analgesia.

As regards the hidden observer phenomenon, Spanos has shown that whatever is involved there is no observer neutrally observing the "reality" of some situation that the hypnotic subject is apparently missing. If it is suggested to the hidden observer that he is buried so deep that he is even less likely to feel pain than the hypnotised subject, then the observer reports that this is the case.

What then if anything is hypnosis? The laboratory hunt for a unique marker of hypnosis appears to have run into an impasse. In great part this hunt has been for some evidence of altered physiological functioning - a hunt for evidence of some altered reflex. The present conclusion must therefore be that hypnosis is not a physiologically distinctive state.

Trance

It is increasingly common to find the hypnotic state referred to as a trance state. By trance here is meant not so much the external appearance of not being fully present but rather an internal absorption - a state of reverie. In contrast to postulating a neural reflex or to saying that hypnosis involves doing what is suggested to one, which is difficult to distinguish from saying that hypnosis involves an abnegation of responsibility, the word trance, I believe, refers to a psychological phenomenon, in a way the other two do not.

This is brought out, for example, by the phenomena of trance logic. Seeing an unreal experimenter or making mistakes when age regressed are readily explicable in terms of imaginative involvement in a project. Also, as noted above, involvement in imaginative exercises, without an explicit hypnotic induction procedure appears capable of bringing about

considerable analgesia. More telling perhaps has been the recognition of the phenomenon of auto-hypnosis. It seems that children in particular are liable spontaneously to go into trances/ fantasies/daydreams and it is argued that this is the prototype of the hypnotic state. The increasing use of the term trance coincides with the return to respectability of research on imaging and imagination that has come about in the wake of the recent cognitive revolution in psychology.

A recognition of the reality of imagery, the importance of consciousness and the autonomy of the psyche provides a defence against the claim that hysteria or the neuroses generally are simply aberrant forms of social protest. In the case of hypnosis, while there are social inputs into hypnotisability, it seems too much to suggest, as social psychologists did, that the reason why individuals tolerate major surgery under hypnosis is in order to please their hypnotist or in order to maintain the identity that they have built up for themselves of being good hypnotic subjects.

Imagery, however, is radically social. We construct our images from common external material and common cultural possibilities. It is this that allows the social psychologist to manipulate the hypnotic state. It also points to the social constitution of consciousness, from which it follows that changes of consciousness can be expected to follow on social events as much as from the prompts of some internal subconscious dynamic - such as diurnal rhythms affecting all of us.

The issue is very much like the question of what is personality? It makes little or no sense to define a personality out of the context of an interaction with others. The kind of person we are depends critically on who we are being that person for. All readers will presumably have had the experience of finding themselves seemingly change personality almost like changing gears, abruptly over the course of a few seconds or minutes, in response to meeting different people - for example their boss perhaps followed a minute later by a student or their lover followed a moment later by their spouse.

A further possibility emerges out of a recognition of a distinction between psychological operations and either mental/social influences on the one hand or neurophysiological processes on the other. In ways that are not yet fully understood, imagination can be expected to influence physiological functioning. A good example of this has been described by Luria in the case of a man with hypermnesia. This individual could make his heart rate increase and other physical functions alter at will, by imagining some scene in real life that would normally have brought about the required change. Thus, he could increase his heart rate by imagining himself running after a bus.

A similar mechanism operating in the case of both hypnosis and hysteria could provide an alternative explanation to the psychoanalytic explanation of altered physical functioning in terms of its symbolic relation with earlier conflicts. When it comes to a case like that of Steven cited in the preamble, such an explanation in terms of symbolism breaks down. What is involved seems more like a re-enactment - symbolism explains nothing. The alternative is that particularly intense imaginative involvement in the course of dreaming could produce these effects. This is plausible, if it is borne in mind, as Luria's experiments would seem to indicate, that some of us appear to have a greater facility than others for translating imaginative absorption into physical effects.

There is one further point to note. Applying the logic of a psychological autonomy of trance states to Jung and the various dynamic or psychedelic therapies predicated on altered states of consciousness, we would have to argue that the compelling nature of some of the experiences involved do not necessarily imply an existence of the experiences other than in the psyche of the experiencer. That is valid experiences suggesting reincarnation or an ultimate meaning or purposefulness to the universe do not provide compelling evidence for beliefs for either of these possibilities. This is not to say, however, that these experiences may not be used fruitfully for therapeutic purposes.

Such a position brings us back to Janet. He took over techniques such as automatic writing, age regression and the creation of other personalities, which had been developed by the spiritist movement, in order to explore consciousness rather than to plumb an unconscious. But he did not believe that the "spiritual" nature of the experiences implied that he was in anyway dealing with a spirit world. From Charcot he took the notion of abreacting traumatic events and from Bernheim the idea of a psychotherapy by negotiation. But he argued in each case for an autonomy of the psychological process involved. While doing so, he argued repeatedly for the interpenetration of personal consciousness with social meanings. The hypnotised subject, he pointed out, has to learn to be hypnotised. That over the course of a few sessions both the subject and the hypnotist learn what they need to do to get to where they both want to get - or perhaps they learn where they want to get.

Ellenberger has pointed out that the various hypnotic states produced since Mesmer have all depended heavily on social factors. The crises that Mesmer's subjects went into were, it would appear, an acute manifestation of the vapours, which were common among society ladies of the time. The somnambulism of Victor and his apparent lucidity when mesmerised by Puységur suggest that freed from the confinement of his ordinary social role as regards his master, Victor spoke his mind to Puységur in ways that he had never done before.

THE DYNAMICS OF ORDINARY EXPERIENCE

In recent years, there has been a fragmentation of the therapies on offer, with in 1980 over 200 different "psychotherapies" on offer according to Time magazine. Many have commented that psychotherapy has in some sense taken the place of religion in modern experience. It does so both on the grander theoretical side and in the mundane realm of convenience inspiration, on sale in a thousand airport and railway bookshops.

In contrast to this diversity, however, there are a group of therapies, which have begun to appear, which do not seem to have a "religious" character. These I propose to refer to as the cognitive-behavioural therapies, although the group includes interpersonal therapy and the motivational interviewing techniques, derived from encounter therapies, neither of which would see themselves as particularly behavioural or cognitive in orientation. As a group, however, these therapies seem more tied to the process of effecting specific clinical changes and less to the reconstruction of personalities according to some preordained mould. And they set about effecting change in ways that have much in common.

In order to bring out the salient and common aspects of current therapies, I will look at how the various therapies handle imagery, details and the question of competence. As will become clear in the next three sections, it is quite arbitrary to cut the material up in this way.

Focus on Imagery

In the last chapter, I dealt with the current practice of cognitive therapy. While in theory cognitive therapy aims to get at and challenge a subject's personal "schemata" (exactly what a personal schema is is unclear), in practice what happens is that their internal imagery or monologues are explored. These are taken as being representative of where the subject is "at" at any one point in time.

Perhaps the most striking instance of the new focus on internal imagery comes from a most unlikely source - behaviour therapy. Behaviour therapy began as an offspring of behavioural learning theory. As such its ideological commitment was to an analysis of the outward aspects of behaviour. In contrast to psychoanalysis, behaviour therapists eschewed all investigation of internal mental events, until such a procedure was shown to work. This came about first of all in the case of phobias. The usual procedure had been to gradually desensitise subjects to a feared stimulus by having them get slowly closer to it. For example, someone with a fear of mice would be asked to look at a picture of a mouse. Then they might be invited to step into a room in which there was a mouse in a cage. Subsequent steps might involve going over to the cage and picking it up, with a final step of picking up the mouse. But one of the findings was that it was often sufficient to get subjects to imagine a mouse or a feared situation. They were encouraged to dwell on the image and while entertaining the image to learn to relax.

Such approaches have been adopted even more widely in recent years. For example, in the case of plane phobias, treatment rather than involving the steps of going to airports, boarding planes and subsequently flying, now may be almost entirely imaginary. Subjects will be encouraged to imagine themselves on a plane, which crashes. They are invited to imagine the chaos and destruction, to see in their mind's eye bits of bodies flying through the air, perhaps even bits of their own body. Individuals, with recurrent intrusive fears of harming their children may be asked to imagine themselves skewering their child with a knife or throwing it out of a window.

These are highly distressing procedures. The fact that they are points to the potency of imagery. The object is to get the individual to the point of being able to live comfortably in the presence of their own images; to stop being frightened by their own minds.

Focus on Details

Prior to its more recent recourse to imagery, the most notable feature of behaviour therapy was its focus on details. The success of therapy was often thought to hinge on whether all the relevant stimulus and reinforcer details had been elicited. Cognitive therapy has equally had an interest in detail. It aims to get all the details of an individual’s current images or cognitions. No attempt is made to dig deeper or to analyse hidden motives. Indeed, no attempt is made to impute motives at all. What happens rather is the subject is encouraged to provide ever further examples and ever further details.

This approach has recently had a notable triumph. In some anxiety states, there appears to be no obvious trigger. These are called panic attacks. Individuals become highly anxious, seemingly out of the blue. It has been accordingly difficult to do therapy with them and there has been a recourse to drug therapy instead. Treatment with antidepressants that have an anxiolytic profile brings about improvement in 50-60% of cases. But a recent modification of cognitive therapy has been claiming a response rate of 90-100%.

The modification in question developed out of an attention to detail. Subjects were noted to become anxious for no apparent reason. But what it was asked went through their mind after they began to panic. Unnoticed in almost all cases of pure panic disorder, it seems are images or cognitions in the mind of the affected person that what is actually happening is that they are having a heart attack or a stroke or seriously losing control in some way or other. They then take the appropriate action. If they believe they are having a heart attack, for example, they sit or lie down and take things as easy as possible. This course of action, however, maintains the whole process because then they are left glad to be alive but unclear as to whether the reason they are alive or not is because of the evasive action they took. The circle is broken in subsequent panic attacks by doing the opposite to what the person has been doing in order to avoid disaster. Thus, if the fear is of heart attacks, they are encouraged to exercise or generally do all the things they ought not do if they were having a heart attack.

In the case of alcoholism and drug dependency, a variety of different therapies from various theoretical backgrounds have recently begun to converge on the need for greater detail than has been traditionally sought. The best known approaches are Miller's motivational interviewing technique and Cox and Klinger's motivational structure questionnaire.

In both approaches, it is acknowledged that the problem with therapy is to some extent not the fault of the substance abuser or any lack of motivation on their part but rather a failure on the part of the therapist to fully understand the problem from within. In the case of motivational interviewing this involves not simply establishing the facts of an individual’s drug or alcohol consumption or making sure they understand the hazards of abuse, but rather making sure the interviewer knows what the person in question gets out of their habit. The aim is to establish as fully as possible the nature of the trade-off being done between risks and benefits and by fully articulating the various aspects of the model of themselves the individual is operating with to enable them to modify it. Even slight modifications may be all that are needed to generate significant change downstream.

In the case of Cox and Klinger's motivational structure questionnaire, the approach is predicated on the understanding that the substance abuser does not lack motivation but rather than the therapist does not understand his motivational structure. To remedy this requires a very detailed investigation of the things an individual finds satisfying or frustrating across a wide range of daily activities.

In treating subjects with borderline disorders, Jerome Kroll has recently highlighted the traditional neglect of detail and the adverse consequences this may have. Commonly such subjects during the course of a therapeutic session will have an episode of disorientation or confusion or will have periods when they experience derealisation, depersonalisation or other odd experiences. While being both subject and therapist may be vaguely aware of this, it has not been customary to establish exactly what is happening, what its triggers are, when it began happening first and whether it can be forestalled. Establishing such details allows the subject to become more competent, which brings me to the next point of convergence between therapies.

Focus on Engagement & Competence

A further aspect of current therapies is their focus on testing things out in practice. This is in marked contrast to the previous approach of the depth psychologies, in which therapy was a private transaction between two individuals and an almost exclusively verbal enterprise.

The most notable exponent of this approach is perhaps Isaac Marks. In a series of reformulations of the theoretical bases for behavioural approaches to therapy, he has moved increasingly in recent years toward a position of arguing that common to effective treatments is the element of exposure. Affected individuals must, he argues, confront the object, or image of their fears. Exposing themselves to the usually avoided stimulus for a sufficient length of time effects significant change. Taking this approach brings about benefits, whether the feared stimulus are the mental images that may haunt a person with an obsessional disorder, someone who is phobic or even in the case of a number of delusional disorders. It also is effectively what happens in the cognitive therapy of panic disorder, in which the breakthrough has involved identifying a cognitive stimulus that the subject can take on.

Rather than simply analyse the material that is specific to a therapy session, in the case of cognitive therapy of depression, there are two other commonly used strategies. One is to get the subject to keep a diary of things that happen between sessions that cause them distress. The other is to give them tasks to do between sessions, which they then report back on. In the case of interpersonal therapy for depression or anxiety, a similar approach is taken, in that an interpersonal problem is identified in the therapy session and the subject is then encouraged to take on the issues raised between sessions.

Why should engagement make a difference? There are a number of reasons. One is simply the benefit that we all get from mastery of a feared stimulus, whether or not the stimulus is one about which we are neurotically anxious. But there is another aspect to this. Engaging in the world always has consequences for the actor. This is the clear basis on which gestalt and encounter therapies were formed.

Whereas Freud subverted the significance of present awareness and impulses, the gestalt and encounter approaches aim at facilitating an appropriation of such material. In the normal course of events, it is extremely difficult to get hold of the here and now. It just does not seem possible to start saying all the things that go through our mind's eye - all the irritations with or fantasies about others. Why not? It commonly turns out that it is a certain view of oneself, of what one spontaneously is, that blocks the expression of the material in question. And the view of oneself that blocks spontaneous expression is socially rather than Oedipally determined. For example, the presence of attractive members of the opposite sex will inhibit certain things being said depending on how I wish to portray myself, as will the presence of my boss or a potential employer. The first things that come to our mind are often not well integrated into our idea of other’s ideas of us. Getting hold of them then necessarily goes hand in hand with a potential transformation of our conceptions of our self - an experience like having the rug pulled out from in under you or having the seeming solidity of things dissolve in front of you. Engagement therefore runs the risk of self-transformation. This I would argue is in part what underlies the therapeutic effectiveness of exposure and homework in both cognitive and interpersonal therapies.

Engagement also raises the question of competence. As will be outlined in the next chapter, when dealing with phobias or obsessional states, Janet took the approach that insight was almost irrelevant, that what was required was to get the subject functioning again. This he did by means of what would now be seen as behavioural techniques, such as thought stopping and response prevention and a deliberate scheduling of personal actions to ensure competence.

Taking a very similar approach to the borderline disorders, Kroll has recently argued that whatever we do for patients, we should at least at the end of the day leave them in some way more competent than they were before - and not less competent as is a common side-effect of the pursuit of "insight". It is this that underlies his appeal to recognise the occurrence of and details of cognitive disorganisation in subjects so that a management strategy can be implemented. These strategies depend in the first instance on good and detailed descriptions of what is happening. As he puts it the heart of understanding lies in the details of what has been or is being experienced.

RESISTANCE

A situation has not been satisfactorily liquidated, has not been fully assimilated, until we have achieved, not merely an outward reaction through our movements, but also an inward reaction through the words we address to ourselves, through the organization of the recital of the event to others and to ourselves and through the putting of this recital in its place as one of the chapters of our personal history… Strictly speaking, one who retains a fixed idea of a happening cannot be said to have a 'memory' of the happening. It is only for convenience that we speak of it as a 'traumatic memory'. The subject is often incapable of making with regard to the event the recital we speak of as a memory; and yet he remains confronted by a difficult situation in which he had not been able to play a satisfactory part, one to which his adaptation has been imperfect, so that he continues to make efforts at adaptation.

Pierre Janet, Psychological Healing.

There is increasing evidence from the cognitive therapy of panic disorder and behavioural management of phobias and compulsive thoughts, that establishing as precisely as possible all of the details of a person's experience opens the way to effective therapy. This is a coherent goal of psychotherapy and one that can be pursued scientifically.

Where some sort of traumatic event has precipitated the disorder, then an attempt to determine the nature of the event and assistance at working through its personal meanings would seem indicated. The conventional wisdom is that simply uncovering the past - as Freud found - does not necessarily transform a present neurosis or personality structure. Despite what may be intense reliving experiences on ketamine, affected subjects may not be cured or may relapse shortly after apparent cure. This striking demonstration of the hazards of straightforward interpretation was one of the main factors that led Freud to abandon hypnosis.

That simply getting the correct interpretation may not be sufficient in cases with the complexity that may be involved in the circumstances of childhood seduction or trauma is almost inevitable, given the account of remembering outlined in chapter 5 in the section on seduction and hysteria. Memories, in this instance, are of distinctly autobiographical events. The need is not to uncover a set of concrete details but rather to reconstruct an autobiography. Almost inevitably successful reconstruction will require the reconstruction of a number of linked autobiographies rather than just one target one. But, it would seem a necessary step on this path will be at some point to establish an agreed version of certain key events in the past.

Establishing these events and promoting competence are laudable goals of therapy, but can more be done? Why do subjects relapse? Does the occurrence of relapse not put a serious question mark against the theory underpinning a particular therapy - as Freud felt in 1897.

Some light can be shed on this issue by considering another recently developed therapy that also focusses on detail and competence but does so from another perspective - family therapy.

Family Therapy

In the case of subjects with schizophrenia and the affective disorders, there has been increasing interest in recent years in the idea of mobilising the individuals own resources to help them manage their illness. There has also been a movement to engage the family of the individual as a resource they can use. This stands in contrast to previous approaches in which the family has all but been seen as the cause of the illness. There is an emerging body of evidence that such approaches decrease morbidity and enhance the quality of life. In the psychoses generally and in many cases of the neuroses, this is a helpful development. In the neuroses, there is considerable scope for a spouse or relative to act as co-therapist in a behavioural programme for example.

However, there is another role for family therapy. A role that seems important in all cases of trauma, be they questions of childhood abuse or the disorders that may be consequent on accidents at work, which it has been pointed out in chapter 5 have been noted since before Freud to potentially lead to significant ongoing disability.

There is a story told about Mesmer that brings out the issues involved. While still in Vienna, he was called upon to treat an 18-year-old girl, Marie-Theresia de Paradis, who had been blind since the age of three. Despite this handicap, she had taught herself to play music exceptionally well. Many treatments had been tried but none had helped. After being magnetised by Mesmer, her sight returned but only it seemed when he was there. Other physicians contested the cure. And Mesmer ended up in dispute with her family. Subsequently she remained blind even when magnetised by him. He put this down to her family having too much interest in her remaining blind - on which depended a considerable income and trips to the homes of the wealthy and famous.

Shortly afterwards, Mesmer left Vienna. There has been speculation that it was his failure in this case which precipitated his move. There has been speculation that she became too attached to him and he to her. Certainly after this case, he became depressed and then left for Paris, leaving his wife behind. In 1784, shortly after the encounter between the magnetic movement and the Academy of Science, Marie-Theresia and her family came to Paris, where she gave a concert. He attended. The story of his "failure" began to circulate Paris, perhaps because the Paradis family stayed 6 months. Mesmer again seems to have become depressed. Later that year he left Paris and effectively walked out of history.

The point behind this is that the involvement of the Paradis family and their interests in this case should probably not be taken as a case of conscious contrivance. But rather an instance of the need to be prepared sometimes to renegotiate the identities of several people if enduring change is to take place in one. It is on such premises that family therapy for refractory neuroses is based. Of the cases cited in the preamble, all bar two had significant family involvement, that probably contributed to chronicity. The social component of such a therapy should not be taken to imply that what's involved is a case of social engineering and that accordingly hysteria is a manifestation of social repression. What is involved is, rather, a case of manoeuvring a group of people to a point where all can imagine other possibilities for each. The focus on imagination should indicate the dynamic nature of what is involved.

There are a number of old sayings from many cultures to the effect that if you want to hide something stick it under the nose of the person who is looking for it. It is all too obvious that as Tennessee Williams put it in Cat on a Hot Tin Roof, when living together, especially in families, we live under "the thundercloud of a common experience". In traditional analytic and depth therapies, with their focus on the verbal exchanges between two individuals in an artificial setting, this obvious point has been missed. In contrast, it would seem to be something than cannot be avoided by therapies that aim at establishing what the details of a situation may be, the constraints on individual imagination and that aim at promoting competence in settings outside of the therapy session.

10 THE GENESIS & SIGNIFICANCE OF THE NEUROSES

On seeing that all dead bodies become devoid of heat and movement, people have imagined that it is the absence of the soul that made the movements the heat cease. So they have groundlessly believed that our natural heat and the movements of the body depended on the soul. Whereas they ought to think on the contrary that the soul departs when someone dies only because the heat ceases and the organs used to move the body disintegrate.

Descartes. The Passions of the Soul Article 5

I have argued in The Suspended Revolution that a great deal of the current difficulties in psychiatry stem from Descartes' distinctions between a spiritual mind and a material brain. This dualism had 3 consequences. It made it difficult to distinguish between psyches and minds. An allied problem was that of appreciating that there might be a set of specific psychological disorders. This has led to difficulties with the idea of a neurosis. Is it a disease or is it just bad behaviour? Finally, it fostered a mechanistic view of man, which led to the determinist view found in psychoanalysis and the notions of degeneracy or endogeneity.

The neuroses are important because they point to the existence of a set of psychological operations that are distinct from both mental operations and brain functioning and their precipitation by environmental events runs counter to the received notion of endogeneity. This forces us to look again at the question of what is the human mind - or what it is to be human.

PSYCHES & MINDS

Prior to Descartes, it had been the norm to distinguish between 3 levels of the soul. The lowest level which involved the appetites and drives was found in all animals and was called the vegetative soul. An intermediate level involving perceptions, emotions and memory was found in higher animals and was called the psyche. The highest level was thought of as the distinctively human part of the soul, the part that would survive death, the nous, or as it would now be called the mind.

Prior to Descartes there had been little concern about the location of the mind. The reason was as follows. The cosmos had been up till then been something that was kept in existence by the deity's constant fiat. Renaissance science pointed to the possibility of its being a machine, that the deity had at some point wound up and started going but which he had since left to run its mechanical course. The successes of Copernicus and Galileo established the possibility that the workings of the machine could be investigated, without the investigators being seen as sacrilegious.

In a similar fashion, investigators began to probe the workings of the human body. Where once had been seen the mysterious portals and vital fluids of the soul, developments laid bare a variety of machine parts - a pump, bellows and lenses. Writing shortly after Galileo's trial, Descartes could not claim that man was wholly and entirely a machine. Nor would he have been personally inclined to go this far, even if he had nothing to fear from the ecclesiastical authorities. While man might be a machine, for the most part, it seemed that there must be some part of him that remained in constant, or at least potentially constant communion with the divine. To deny this would have been to do away with the possibility of religion.

The resolution of the dilemma was to propose a mechanical body, of which most of the brain was potentially a part and a non-mechanical and non-material soul. Much philosophical effort since has gone into working out how such an arrangement might work in practice. How material and non-material entities might interact.

But in the midst of this attempt to distinguish two sides of a philosophical mobius strip, one important aspect of thinking about the mind prior to Descartes has been lost.This was the notion that there were 3 distinct layers to the soul. The demands of science in the 17th century required a division of man into two entities. This was dictated by strategic necessity rather than by virtue of its being either a good or an obvious description of how things actually are.

The division required the sacrifice of one of the traditional layers of the soul. One set of faculties, the lowest, containing the appetites and instincts could conceivably operate mechanically and the thrust of the developing neurosciences was in favour of mechanising as much as possible of behaviour. Another set, the highest, containing the spiritual and mental faculties couldn't obviously be readily mechanised. It became the ghost in the machine.

But what of consciousness, memory, emotion and imagination? Where once there had been three possible locations, there were for Descartes effectively only two. Faced with the faculties of consciousness, imagination and emotion, he opted to locate them within the soul. This had two effects. One was to hinder their subsequent scientific investigation by contributing to the impression that there is something insubstantial about consciousness, imagination and emotion.

The other effect was to set the seal on what had been a progressive degeneration of our ideas about the mind. For the Greeks the mind was the part of man that was responsible for our striving for personal coherence and consistency, our drive for authenticity. It was the part of us that was not found in animals. However, so complete was the success of Aristotle and Plato in articulating a vision of what it was to be human, that the terms they used to explain their position became set in stone. From the mind being a striving after coherence and an effort to determine the right course of action, using all the faculties of insight, judgement and rational argument open to man, it became the faculties of insight and judgement.

One consequence of this was that as work on the psychology of animals progressed and revealed them to have problem-solving capabilities, consciousness, and emotions, it has seemed that they also must have "minds". A clear idea of what is distinctive about the human state has been lost.

Another consequence has been the attempt to localise the mind. Had Descartes been prepared to envisage a wholly mechanical man, he had no idea of just what kind of machine was needed to produce thinking and equally no idea of what kind of machine the brain was. But since the invention of the first calculating engines by Babbage in the 19th century, the ultimate localisation of the logical or rational engine has been clearly on the scientific agenda. A problem with this research programme, however, is that despite the claims that Aristotle characterised man as the rational animal, neither Aristotle or Plato would have agreed that the distinctive feature of human beings is their possession of a logical or rational engine as such.

In the 19th century, the interest of this mechanical research programme coincided with that of evolutionary theory. It is little appreciated that one of the fundamental concerns of the early

evolutionary theorists, Darwin, Spenser, Huxley, Romanes, Wallace, Baldwin and James was to account for the human mind in evolutionary terms. By this they did not mean the capacity for solving problems but rather the moral faculty in man. If this could not be accounted for, then God must have intervened at some point in the process and the whole of evolutionary theory as a consequence would be trivialised.

But how could a moral faculty evolve? There were 2 options, which were effectively determined by Descartes, one romantic and the other "rational". The romantic approach was that some universal mind, suprapersonal consciousness, wisdom or panpsychism is in some way inherent in matter. This idea had first been put forward in 1760 by Julien Offray de La Mettrie, who proposed that matter harbours active properties of motion and sensation which are expressed in mental activity when matter is combined to the level of complexity found in humanity.

Somewhat later, Romanes and Wundt both claimed to be able to detect manifestations of the mind in single celled organisms. Clarke and Jacyna in their monumental work on the origins of 19th century neuroscientific concepts have argued that a great deal of the progress in this area owed its inspiration and driving force to the romantic programme of finding intelligence, as opposed to just intelligible mechanisms, in material entities.

The rationalist alternative was that the mind was a consequence of sensations from outside. This was the Humean view. Ideas were held to be copies of sense impressions. Thinking was a matter of associating these images. This approach had two implications. One was that humans potentially were reflex automata driven by the environment, which after all is the source of all sensations. The other was that the source of clear ideas must lie in refined sensory impressions. Upbringing, therefore, would be important to the production of the enlightened individual.

Both of these models would permit minds to evolve. The romantic one did so in so far as minds were inherent in matter anyway and that evolution involved nature revealing herself. The rationalist alternative did so, as if reason was just an amalgam of sensation, then animals must be able to reason, in a kind of fashion, and man just did more of it. Both models, however, in their lack of a clearly articulated and differentiated model of the mind were prone to derail.

In failing to distinguish psyches from minds and more particularly in having a model of the mind that was solely associationist, the pitfall for rationalism was the risk of making mental operations purely reflex and automatic. This thrust has led to the physiological and behaviourist approaches to mental functioning that have in general subverted the idea of an intending "I" and made of man an automaton.

The romantic approach, in contrast, with its failure to make differentiations had little control over meaning. Meaning welled up from below as it were, uncontrollably. This approach underlaid the programme of the depth psychologies and in particular psychoanalysis. For this reason they have always been prone to derail from psychological issues into the realm of the mental. This derailing has been all but irresistible when, for example, exploring the psyche has thrown up evidence in favour of re-incarnation and metempsychosis, a sense of presque vu, out of body experiences and white lights on the edge of consciousness.

There has, in addition, been a political dimension to these research programmes. The enlightenment values involved a belief in the ability of reason to decode nature. This belief led to a dethronement of religion and a belief in the progress of liberalism. Truth was no longer something revealed but rather something man worked out for himself. This programme, however, was seriously jeopardised with the French revolution, which seemed to many like an upsurge of the irrational and of sectional interests. An upsurge that compromised the belief in inevitable progress. It is no accident that mesmerism was closely associated with the revolution, attesting as it did to a set of extraordinary, reason defying forces in nature.

Evolutionary theory straddled the divide between romantics and rationalists, tending if anything to come down in favour of the romantics. Observations as early as the 2nd century by Galen on goats learning to take milk from their mothers suggested that animals have a wisdom that is untutored, that is not just environmentally determined. Darwin's position was that the inherited structure of the brain must in some way cause instincts. These were passed on because habitual behaviours modified structure and that the modified structure is then inherited. This could be interpreted simply in terms of the evolution producing a better adapted machine. But time and again, evolutionary theorists and the psychologists who operated on the fringes of evolutionary theory appear to have interpreted human behaviour as simply a manifestation of what is inherent ab initio.

This tendency and findings such as out of body experiences have led to the heady mixture that is spiritism and to the belief of many depth psychologists that they were dealing with the fundamental questions of human existence. What seems needed here is a distinction between a philosophy of mind and a psychology of "transcendent" experience as first put forward by William James and more recently Andrew Neher. But to locate this body of knowledge convincingly as a psychology rather than as a science of ultimate human meanings will need the articulation of a model of human functioning that distinguishes between psyches and minds. The existence of the neuroses points strongly toward the necessity for such a distinction.

THE NEUROSES

As the body was desacralized in the course of the scientific revolution so also were its afflictions. Where formerly, illness, disease and disfigurement were taken to indicate something about the spiritual essence of the individual, they became increasingly seen as mechanical disorders. Mechanical because in line with the distinctions between mechanical brain and spiritual mind, the only effective options in the case of behavioural disturbances were moral disorders or mechanical breakdown.

In the case of the nervous disorders, the breakthrough was made in the early years of the 19th century with Gall's discovery of the hierarchical structure of the nervous system and Magendie and Hall's discovery of the reflex. This led to an intensely physical conception of the neuroses, where previously some vague disturbance of vital spirits was supposed.

All of this changed in 1895. The work of Freud and Janet pointed to a third possibility. In describing the clinical features of the psychoneuroses, they pointed to the existence of a group of disorders involving disturbances of memory, emotion, imagination and consciousness, that involved neither physical/mechanical breakdown nor moral failing. This caused a problem in that there were effectively no options other than mechanical breakdown or moral failing.

One attempt to solve the problem has been to define the neuroses as mental illnesses along with schizophrenia and manic-depressive illness. But this attempt, arguably, has led to a discrediting of the notion of a psychiatric illness. Manic-depression and schizophrenia were defined as illnesses by Kraepelin on the evidence from their clinical picture that they must involve biological disorder of some sort to produce some of the symptoms.

As the neuroses lack the stigmata of biological disorder, how should they be classified? In attempting to answer this, we must decide how many neuroses there are, what causes them and what happens in a neurosis.

How Many Neuroses?

This book began with hysteria as the pre-eminent neurosis. However, a process of dissecting neurotic syndromes out of the body of hysteria had begun with Benedikt's description of Planschwindel (dizziness in public places) in 1870, described as agoraphobia by Westphal in 1871. In 1873, Lasegue in France and Gull in England described anorexia hysterique or anorexia nervosa. In 1878, Westphal described a syndrome he named obsessive-compulsive disorder (Latin obsidere - to besiege) in which individuals are besieged by repeated intrusive senseless acts and ideas. Around 1895 Hecker, Wernicke and Freud all distinguished an anxiety neurosis. At the same time, a number of paranoid states were described by Janet, Freud and Kraepelin, none of whom saw the states in question as illnesses.

Today's classificatory systems distinguish between, generalised anxiety disorder, phobic anxiety, social phobia, panic disorder, obsessive-compulsive disorder, hypochondriasis, post-traumatic stress disorder and a variety of dissociative and somatising disorders. But there has always been a claim that there are far fewer core neuroses - perhaps even only one general neurosis. The evidence for this has been that neurotic disorders co-occur more often than would be expected by chance.

The various neuroses would be distinct, it is argued, if they had separate aetiologies, natural histories and responses to treatment. It is not clear that they do. Increasingly a cognitive-behavioural approach seems effective for phobic disorders, obsessive-compulsive disorder and panic disorder and all of these disorders tend to occur on separate occasions in the one individual. However, while panic disorder, agoraphobia and obsessional disorders are associated, these neuroses are not more closely associated with hysteria and dissociative states than would be expected by chance. These findings fit with Janet's contention that there are broadly speaking only two neuroses - hysteria and psychaesthenia. Hysteria, as we have seen, he saw as being an acquired disorder, triggered by environmental traumas.

Psychaesthenia, in contrast, he saw as being more constitutional in origin. The term, psychaesthenia, literally means a weakness of the psyche. The evidence pointed, for Janet, to a weakness that was manifest very early in life, although it could also appear later in life following stress or fatigue. His descriptions of the state first appeared in 1903 in *Les Obsessions et La Psychaesthenie* which described 300 cases. To this day it is praised as containing the best descriptions of obsessional states, but it remains untranslated.

For Janet psychaesthenia involved three stages. In stage 1, the individual has an inner sense of incompleteness and torment. They get satisfaction from nothing they undertake. This leads to agitation and doubt, indecision and continual mild amnesia.

In stage 2, ruminations, phobias and generalised anxiety appear. A developing compulsion for order and perfection leads to checking. Uncertainty leads to defensive rituals. Obsessions with homicide may lead to a knife phobia. Obsessions such as that one is fat lead to a food phobia and dieting - anorexia nervosa.

Stage 3 is dominated by forbidden thoughts of a sacrilegious, violent or sexual nature. A parent may develop images of themselves cutting off their child's head and throwing it in boiling water. He described the cases of a woman troubled by thoughts of priest inserting wafer into her anus and a man with an impulse to rape a woman in a church pew. This kind of clinical picture, which is characteristic of obsessive-compulsive disorder was, he thought, only the final stage of a process and not the core of the disorder. Other possibilities on this level were a range of paranoid disorders that until recently would more commonly have been diagnosed as schizophrenia.

Reviewing these arguments and in the light of evidence that will be outlined below, it makes sense to work with the idea that there are four neurotic syndromes, although whether this means four entirely different disorders or not is unclear as there is considerable overlap between the syndromes.

One would be what was hysteria but now comprises the complex of post-traumatic stress disorder, borderline disorders and multiple personality disorder. Its distinctiveness derives from its origin in trauma of one form or another. This is shaped by the developmental stage at which the trauma occurs. Its symptoms are in part distinctive, involving as they do in one way or another the rehearsing of a past event, but the mechanisms that maintain it are not distinctive to it, as will become clear below.

A second syndrome involves the phobic and obsessive disorders. This also owes its origins largely to environmental factors. In large part the mechanisms that maintain it are also implicated in the post-traumatic disorders, as the next section will illustrate. Disorders in this complex respond well to cognitive-behavioural interventions. It seems that similar interventions offer the best hope to the post-traumatic disorders although they do not at present offer as clearcut a response as they do in the phobic and obsessional disorders.

A third syndrome comprises some anxiety states and paranoid/hallucinatory disorders. Traditionally in psychiatry, the presence of delusions has led to a diagnosis of psychosis with the implication that the subject is therefore ill rather than just psychologically distressed. This tradition stems from the received belief that Kraepelin distinguished only two mental illnesses, manic-depression and schizophrenia, which are psychoses because of the occurrence of delusions in both.

It is true that Kraepelin proposed that there were two distinct mental illnesses, but he also claimed that there were three psychoses with paranoia being the third. This according to Kraepelin was a delusional disorder that had its origins in personality vulnerabilities - it was a psychological disorder. Writing at the same time, in 1896, Freud endorsed including paranoia among his neuro-psychoses of defence, along with hysteria and obsessive-compulsive disorder. A view that Janet also endorsed as outlined above. Kraepelin's position on paranoia was taken up most clearly by Ernest Kretschmer who argued for the existence of sensitive psychoses. These are psychological conditions that stem from specific stresses on individuals who have a vulnerable or sensitive personality.

In part the difficulty in accepting that neurotic disorders could involve delusions seems to come from our belief that the neuroses are not severe disorders and that they could not therefore evolve to delusional "intensity". But this is a modern view. Rereading the older texts, it is clear that some of the patients Freud and Janet diagnosed as hysterical had episodes of florid "madness". Also as noted, there have always been clinicians who have seen the need to keep open the idea of a hysterical psychosis. French classification permits a diagnosis of bouffée délirante, a short lived "psychotic" state that is neither manic-depression or schizophrenia. The other point to note is that the perceived severity of some psychoses is linked to a set of neurotic reactions to an underlying disturbance.

In favour of the notion of a paranoid neurosis are an increasing number of reports of an efficacy of cognitive therapy in a number of chronic delusional states. There is also some emerging evidence that deluded subjects have an atributional style liable to predispose to the generation of beliefs that are likely to be seen as delusional.

Thus, there are grounds for undoing the equation of severity – psychosis - illness. Undoing it, however, would leave us with a set of potentially severe disorders that reason demands we should be able to categorize but which still would not fit very well into the ill-immoral dichotomy we have at present. This is less of a problem, if the neuroses are seen as "mild" disturbances of behaviour with anything severe automatically being seen as an illness.

The fourth syndrome is that of substance abuse. This illustrates by contrast some of the points being made about the other neuroses. It also falls uneasily into either the categories of disease or badness. It may also be extremely severe.

What Happens in the Neuroses

States of paranoia, or florid obsessionality, Janet argued, must hinge on some prior weakness. The weakness showed itself, he believed, in a general difficulty with action and in particular with personal relationships. In contrast to the hysteric, who either loves or hates intensely, the psychaesthenic doesn't know whether he loves or hates. This, he proposed, was because they lacked sufficient psychological tension.

Exactly what psychological tension was supposed to be was never entirely clear. It was something that physical illness, fatigue or emotional stress all could lower. He suggests that it at some point corresponds with a degree of physical tension. These ideas, however, were never developed as by the time he moved from describing cases of psychaesthenia to speculating on its origins in 1920, the psychological debate had passed him by.

What might the psychic weakness be and is it constitutionally determined? The first point to make is that Janet saw overt psychaesthenia as commonly having its onset during an episode of depression or low morale. He appears to have seen depression as just one more manifestation of psychaesthenia. This is a position that it would be difficult to defend today, with current research criteria clearly differentiating depression from phobias and obsessional disorders. What is clear today is that depression appears to generate neurotic responses, either hysterical, obsessive-compulsive or phobic and that in a substantial number of cases these neuroses survive the underlying depression. Depression may effectively provide an unrecognised trauma or precipitant to later apparently autonomous neuroses.

There are further possibilities. Approaching the issue of the genesis of phobias and obsessional disorders from a learning theory perspective, Isaac Marks has recently argued for a biological input. He notes that evolution appears to build certain propensities into organic systems. Why else would we be so afraid of sharks and snakes but not cigarettes and cars? In all species certain stimuli can be shown to trigger anxiety or avoidance reactions. Eyespots are a good example. Many species of moth appear to have developed wing markings that look like a pair of eyes, when the wings are opened out, and this appears to produce avoidance reactions in predators.

In a recent study Watts and Wilkins found that subjects with agoraphobia react to visual stimuli such as fluorescent lights, glare of sunlight on water, bright sunshine and stroboscopic lights with headaches and panic. The same stimuli trigger headaches in a large number of otherwise normal subjects but not the sense of panic. Another stimulus which could potentially have anxiogenic effects is hyperventilation, the effects of which may if the hyperventilation is sustained be comparable to low doses of LSD or ketamine.

Why should such stimuli lead to a neurosis? A possible explanation of this is that in subjects who have a neurosis, certain prodromal symptoms may lead to maladaptive cognitive reactions. Watts has listed a number of reactions that can be observed in phobic and other subjects, the varying combinations of which may produce the differing clinical pictures.

One possible reaction is to cope with anxiety by suspending active perceptual processing. In favour of this are findings that spider phobics can't distinguish spiders they have seen before from ones they haven't. There are three ways in which this could come about. One is that in the presence of spiders they actively avert their gaze. Another is that they enter a state of poor focussed attention. They become glazed. The third is that even if asked to look at the spider and describe it, they show poor recognition afterwards. This suggests a set of distraction strategies are being employed such as pretending to be somewhere else, distorting the feared image or concentrating on non-feared elements of a situation. These lead to the feared stimulus not being processed.

Watts suggests that such mechanisms may underlie depersonalisation and derealisation, which are such a feature of post-traumatic stress disorder. It is known that phobic subjects, who have symptoms of derealisation at a bus stop for instance find that if they are joined by a therapist the environment comes back into focus. Such strategies permit the subject to manage but, like the reactions of panic-disorder patients who think they may be having a heart attack and sit down, they are essentially counterproductive and maintain the maladaptive behaviour in place.

A further cognitive reaction that may lead on to a neurosis and that may play some part in all psychaesthenic states, and certainly does in panic disorder, is to misinterpret the symptoms of anxiety. In all cases such a formulation depends on the essentially normal workings of physiological systems. The problem is psychological rather than mechanical or moral. This is brought out by the common finding that phobic and obsessive subjects, when called to do things without prior warning, often have little trouble. Central to the development of neurotic difficulties, therefore, is anticipation and a set of cognitive management strategies that are essentially counterproductive.

What causes Neuroses

Regarding the origin of those neurotic states that do not result from trauma, Marks also notes that there are lessons from evolutionary biology that may of significance. While learning theory has been associated with experiments on animals and extrapolations to man that have often been of dubious significance, Marks notes that all too often learning theorists have been using laboratory rats as experimental machines rather than animals. A concern with them as animals might have led to greater interest in ecologically valid learning paradigms.

In such paradigms, social learning appears to be important, with the role of conspecifics assuming much greater importance than early learning theory would have expected. Examples have come from birds shown a previously unencountered object, while at the same time aware of their conspecifics engaging in the bird version of anxiety behaviour - mobbing - but in response to a predator, unseen by the experimental birds. The experimental birds start to produce a mobbing reaction to the stimulus they have been presented, which generalises to later settings and which they can then be shown to transmit to their conspecifics.

A dramatic example has also come from herds of African elephants, in which some members were shot several generations earlier and in which it is known that the younger members have never been exposed to adverse consequences at the hands at humans but who can still be shown to flee from humans. This suggests that learning is being transmitted effectively from one species member to another.

These findings and the findings of anxiety reactions to hyperventilation and glaring sunlight point to two things. One is that learning about certain things may be primed prepotently and the other is that particularly quick learning may take place during observation of conspecifics. The importance of this kind of learning is that anxiety is learned and the possibility of unlearning is blocked. In the case of a mother and daughter faced with a mouse, for example, the mother's reactions of anxiety will lead to the daughter being anxious. But, whereas if the daughter had fallen off her bike, she would have gotten back up quickly thereby forestalling the development of a neurosis about bikes, this option is often blocked when a child learns anxiety from a parent.

Such prepotent learnings, therefore, might predispose to neurosis and the influence of significant others may determine the outcome one way or the other. However, this is true for all of us. The process can be overridden, either if the subject is introduced to the stimulus in the first instance while in presence of somehow who handles it competently but also subsequently by cognitive and behavioural techniques. These appear to tackle the issues quite successfully and lead to a subject learning to override what before had incapacitated them.

Thus, even if not precipitated by trauma there is considerable scope to argue that the neuroses owe their origins to environmental events. I will also argue for the possibility of an "accidental" origin for most neuroses rather than one that is endogenously determined and inevitable. The case of substance dependence brings this out and also how social factors can significantly shape the course of events.

Substance Dependence

Substance dependence provides an instructive counterpoint to the issues raised here. In the case of alcohol, the opiates and cocaine, there are clear physiological changes induced but there is no biological disorder - other than the side-effects such as cirrhosis. Just like the hysteric, there may be nothing that clearly differentiates the alcoholic from the rest of us other

than a pattern of behaviour. There is no such thing as a substance-abuse proneness. The majority of drinkers and drug users are not addicts nor is there any clear amount of these agents that makes a consumer an addict. The goal of getting the alcoholic or drug user to remain abstinent often seems to be the only thing that gives these disorders their shape. If the drinker were let get back to social drinking, for example, they would be indistinguishable from the rest of us.

Well might an Eliot Slater have taken up arms against the snare and delusion that is substance dependence as indeed many people have. Nevertheless, just as with hysteria, no amount of inspired polemic can get away from the existence of a vast problem. There has, in addition, been a long tradition of seeing substance abusers as degenerate and just as with hysteria this has helped focus attention away from the environmental precipitants of the condition.

Consider first the political dimension. Despite having being the first nation to legislate against opium use in 1729, the Chinese found their domestic market being flooded with opium imports by the British in the 1830's, owing to a British attempt to balance their trade deficit with the Chinese. This led to the destruction of opium cargoes in Canton in 1838, which precipitated the opium wars - fought by the British in the name of Free Trade. Complete cynicism is not warranted as it was only after 1868 that opium began to be viewed as a problem in the U.K. But at present the most vigorous advocate of Free Trade has all but been at war in one country and has invaded another in an attempt to stamp out trade in cocaine. This despite the fact that one drug of addiction, tobacco, that is a cause of greater morbidity than cocaine, has in the past been the biggest foreign currency earner in the U.S and that in the 19th century taxes on another, alcohol, regularly formed up to half of the revenue of the U S administration.

In trying to square such circles, the hitherto dominant therapeutic focus on the degeneracy of substance abusing individuals rather than on the management of appetites in the treatment of substance dependency has a convenient effect, in that the need to question the role of society in the problems of substance dependency is avoided. Were the arguments that are often applied to substance abuse applied to food, which is reasonable given that both operate through common appetitive mechanisms, one might come up with the formulation that the current overweight state of Western populations generally represents a collective flight from reality. While this argument has germs of truth in it, it seems unlikely that we are collectively more removed from the truth, neurotic or out of touch with ourselves that we were as a society 100 years ago. What has changed rather is the availability of food.

In the case of alcohol, repeated surveys show that the amount of alcohol abuse reflects the relative cost and availability of drink. This holds true for smoking also. Similarly the current escalation of cocaine abuse is more likely to be predicated on an increase in its availability than any degeneration of society. Yet in a manner that mirrors the alcoholics ability to ignore the incompatible consequences of his drinking, we as a society appear to be able to ignore the evidence that what is involved is a social problem needing social management.

Aside from blaming the individual another recourse has been to blame the substance. This has been particularly the case with the opiates, despite the fact that the problems associated with opiate abuse are those concerning its criminalisation rather than those that stem from the substance itself. Opiate withdrawal is less severe than alcohol withdrawal. Its reputation as being fearsome rests rather on medical attempts to force the addict into withdrawal using a range of compounds some of which have proven fatal when administered too enthusiastically.

Historically many individuals have been chronic opiate users, in the era before the opiates were criminalised. The evidence from such individuals is that far from leading to degeneration, it is quite possible to function normally and indeed productively while on opiates.

The chronic but non-deleterious abuse of opiates continued in the West essentially into the 1950s, often maintained by a system of notification of addicts and the prescription of their drugs, which made their habit inexpensive. It was only in the 1960s when the market was flooded with cheap imports that could be obtained through non-medical outlets that the forces of social control were mobilised to make opiate indulgence criminal.

In so doing there have been three notable consequences. One is that as pure opiates are not available, those who wish to have them have to resort to compounds that are impure with all the consequent risk to individual health and to public health through the spread of AIDS. Second as opiates have become more expensive, abusers have resorted to crime to finance their habit and a violent underworld has been created. Finally, the taking of opiates has become a matter of intrigue and their attraction to many has correspondingly increased.

Thus, the social response to opiates has confounded the problem. It has done so despite the fact that by any index opiates are less deleterious to health than alcohol, which it seems we can live with passably well and probably could manage somewhat better if we attempted to tackle the issues dispassionately. However, blaming the problem on the pernicious effects of the agent in question or the degeneracy of the individuals concerned is a convenient way to avoid tackling the issues.

If we do away with the spectre of degeneracy implied by the notion of cravings and say that classic substance dependence involves the management of appetites, what about LSD, PCP and the recent designer drugs that do not cause either withdrawal or cravings? These are also abused despite increasing evidence that abuse may be fatal or leave long-lasting physical damage. Why?

Such abuse cannot on the face of it be accounted for by invoking physical mechanisms. The only explanation seems to me to be that underlying drug use there is a certain amount of playful activity. This has two aspects to it. First there is our innate curiosity which leads us to try something new simply because it is there, just as some of us will climb unclimbed mountains or run across continents. Second playfulness is a means to handle boredom. For want of something better to do, humans will turn to virtually anything no matter how dangerous it may be. Even Russian roulette, as Grahame Greene confessed, may be a way of livening things up or structuring them.

From this perspective, it is simply a matter of accident that some of the activities available to be sampled cause physical dependence and others cravings. Just as it is an accident that some of the pursuits available, such as motor-bikes, have a high fatality rate. Just as with motor-bikes it seems that if one can get through a stage between the ages of 15-25, without having been involved in high-risk pursuits or having suffered as a consequence, then one is much less likely to be accidentally killed or end up substance dependent. It is not that playfulness diminishes after this age so much as commitments and responsibilities restrict for our opportunities to participate.

This perspective throws the spotlight back on the social factors that contribute to substance abuse. Where there is a restricted range of social outlets, it is much more likely that any one outlet will be indulged in to a greater extent. Where the outlets available are unstimulating, it is much more likely that dangerous alternatives will be resorted to. The question of what is perceived as unstimulating is very much a question of education and culture. Putting these factors together loads the gun barrel with more live bullets in the case of certain social classes and environmental situations. But such implications can be avoided by adhering to the notion that drug use stems from individual perversity or the overwhelming potency of certain agents.

The issues in question are brought out by recent references to a new "neurosis" suffered by "women who love too much" who are supposedly addicted to being beaten up and ending up in unsatisfactory relationships. While there is certainly a small group of individuals with borderline disorders, who may be said to precipitate repeatedly their own victimisation, the vast majority of women (or men) who are beaten up or psychologically tortured do not in any meaningful sense of the word bring this on themselves. The reality is that social relations are such that people often cannot easily get out of damaging relationships. This reality and the need to do something about it can be all too conveniently ignored by blaming the problem on some endogenous masochistic impulse.

The Significance of Neuroses

The structure of the neuroses, outlined above, points to a set of disorders that can neither be put down to mechanical breakdown in the biological machine or accounted for in terms of individual evil or inauthenticity. Individuals with a neurosis are no more or less inauthentic than the rest of us. They have a circumscribed problem that cannot in any meaningful sense be said to be the result of lack of self-knowledge. But equally they cannot reasonably be said to have a disease - I am not saying that there are not neurobiological correlates to the neuroses but rather there is no evidence from them of any physiological disorder.

This difficulty can be evaded by saying that they are ill, where by ill is meant a dysfunctional pattern of behaviour. But this conceals rather solves the issue of deciding whether this dysfunctional pattern of behaviour is equivalent to the disturbances in behaviour brought about by disease or to those that can broadly speaking be categorised as "moral failings". This difficulty cannot be avoided unless we wish to return to a position of considering all disease to be a manifestation of moral failing, of some original sin or unless we take up a radical alternative that all behaviour of which we, or some unspecified authority, does not approve of will be classified as disease.

A further option is to accept that the neuroses are neither instances of inauthenticity, moral failing or disease: that they are autonomous psychological disorders, a different category of event to the other two. Taking this option, however, requires some clear distinction between psyches and minds. At present this is blurred. Until the issue is tackled the problem of categorising the neuroses will remain.

A further aspect of the neuroses to emerge from the above analysis is their accidental quality. There seems to be nothing inevitable about the neuroses. Their occurrence and course depend it would seem on a conjunction of factors. They seem embedded in the environment, so much so that in cases in which family therapy is appropriate, their resolution may be a matter of changing the environment. This does not fit the picture of a machine or mechanical

breakdown that has been the dominant metaphor of man and his physical afflictions since Descartes.

THE MECHANISATION OF THE MIND

Descartes division of man into a mechanical body investigable by scientific means and a non-mechanical spirit gave an impetus to a mechanistic approach to science. From there on the objects that science would investigate, from the macro to the microcosmos (man), were seen essentially as machines whose working parts had to be anatomised. Science became experimental, in the sense of taking the machine apart to see how it works rather than investigative in the sense of hunting for the range of different machines there might be that could do the same job. Success was being able to take the machine apart and put it back together again in a way that worked. Such an approach favoured a philosophy of science that emphasised logic. This follows as all machines are logical. They do not work if they're not logical.

In the middle of the 17th century, the notion of probability was discovered. By the end of the 18th century many of the developments that would later lay the basis for statistical science were in place. The earliest developments of this approach were sustained by the needs of the insurance industry. But there gradually grew up a body of data on populations and life spans, morbidity and mortality and more importantly a familiarity with the notions of a normal distribution of values and the idea of correlating the incidence of one thing with that of another. These developments were later to assume greater significance with the emergence of evolutionary theory, for which the idea of a normal distribution of qualities around a mean was a sine qua non.

These developments intersected with the idea of a mechanical science only in the first half of this century. The idea that science might not be the logical exercise it had been thought to be and might instead be something more investigative aiming at probable or best possible descriptions took shape under the influence of evolutionary theory but more specifically in response to the development of quantum mechanics and Mendelian genetics.

This development was resisted in the life sciences and in particular in psychology, almost certainly owing to insecurities about scientific status. In psychology, the earliest experiments by Wundt and others were seen as only necessarily involving one subject. More than one subject or repeated measures in one subject were taken in essence to be replications of the original experiment. When Fechner, Wundt and others found considerable intra- and inter-individual variation, this was put down as measurement error round the true mechanical value. It is only in recent years that both psychology and physiology have realised that this variation is not error around some true mean but an indication of the nature of biological and psychological processes. They are inherently variable - with some of the variation being rhythmic.

That such discoveries should take so long to emerge despite the availability of statistics is revealing. Psychology has not lacked for statistics. To most observers it probably seems that the subject is inundated with a welter of meaningless statistics. But until very recently statistics have been used in a mechanical fashion rather than for the purposes of investigation and description.

As early as the 1880s, Francis Galton was doing population surveys of mental imagery and autobiographical memory. This method of investigation, which aimed at establishing an existing

distribution of qualities, is now termed an ecological approach. It derived its rationale from evolutionary theory rather than from physics. The statistical basis for this approach was provided by Pearson who developed the correlational methods to describe the data being generated. Despite this basis and a usefulness in applied psychology, this approach to psychology essentially lost out to a mechanical tradition.

Pearson's correlations were reified by Spearman - turned into parts of a machine. It was inferred that the distribution of IQ scores indicated a distribution in a very physical amount of intelligence in subjects. This transformed the intelligence testing enterprise, which began life as an effort to map out the precise difficulties some students were having so that they could be assisted, into material for the eugenics movement. Subsequent IQ testing of different nationalities was then put to distinctly political uses.

More generally in the experimental tradition, as mentioned error values were attributed to the experimenter rather than thought to be inherent to the subject matter. The subsequent development of the t-test and Fisher's analysis of variation, in the 1930's allowed what was essentially an automatic or mechanised form of inductive logic based on experimental results taking this approach - an approach designed to remove experimenter error rather than experimental error. The results of studies in which there were a large amount of variables could be mechanically fed through a calculator or computer which would then churn out "significant" findings.

Such a process may be at odds with a recognition of the true significance of the outcomes which is something that should have been established before the experiment by the investigator. It may seem rather obvious to say that there is no point doing statistics if you don't know what the problem is the first instance. This may sound obvious but the significant results of a lot of psychology and medical experiments in recent years have resulted in this lottery manner. Pills have been given or mazes run by rats and every resulting outcome varied against every other at the data analysis stage. One consequence of this has been that most results have neither been replicable nor of practical significance. Another, which will be taken up below, has been to provide "significant" findings for drug companies which can then be translated into niche marketing based on demonstrated "scientific facts".

Consider in contrast the application of more detailed statistical techniques in physiology in recent years. These have revealed the existence of stable frequencies in neurotransmission and of electrical events in the brain. In this case statistics are being used not to prove something is "significant" but rather to get a best possible description of a phenomenon. The techniques now applied to circadian rhythms similarly aim at getting the correct description of the rhythmicity in question rather than proving "significance". The recent development of chaos theory has taken all this one step further, in allowing for multidimensional, customised descriptions of events.

The Probabilistic Revolution

In recent years a probabilistic revolution has been emerging in psychology as part of the more general cognitive revolution. Along with a recognition that the physiological bases of psychological processes operate probabilistically, has gone an increasing awareness that on the psychological level we operate no less probabilistically. There has been a recognition of man as an intuitive statistician. This in turn has prompted a turn to more ecologically valid investigations of cognitive functioning, as the example of perception may show.

Far from being a simple mechanical act, it is now clear that perception is a sequence of best possible guesses. This follows as it is based on uncertain cues, such as distance or brightness. As there is an irreducible uncertainty between such cues and the object to be perceived, we all ordinarily use multiple cues and take a best possible reading. Natural selection ensures that we will probably end up with a useful outcome. All of this happens subconsciously. We are not aware of the calculations involved and the objects we perceive seemingly stay relatively constant in the process.

Experimental psychology has traditionally approached the investigation of perception and other psychological operations by attempting to isolate one variable, vary it systematically, while holding other variables constant, to reveal a causal relationship. This method derived from classical mechanics. But it is now accepted in psychology that as we normally use multiple cues, this approach is un-ecological, which perhaps explains why the results of such experiments have never generalised very well to the real world. The reason why this should be the case becomes more clear once it is revealed that not only do we use multiple cues but population surveys indicate that different individuals use different perceptual strategies.

As Egon Brunswik, the originator of the notion of man the intuitive statistician put it "while God may not gamble, animals and humans do... they cannot but help gamble in an ecology that is only partly accessible to their foresight". It took over 40 years for psychology to begin to pick up on Brunswik's initial vision. In recent years, James Gibson has put the ecological approach to perception on a sound footing and Ulric Neisser and others are attempting the same for memory. This approach involves leaving the laboratory and going back to the world of everyday life to get as full as possible a description of the phenomena under investigation.

Applied to the neuroses, this approach would mean that a research programme should involve going out to investigate the range of phenomena that are being experienced by individuals. It is remarkable that after 100 years of psychotherapy with subjects having borderline type conditions, we should have one of the foremost experts on the disorder claiming that the principal stumbling block to progress is our lack of knowledge of the details of these individuals' experiences. As with the study of perception and memory in ecological settings, such a research programme cannot go ahead without enlisting the experimental subject as a co-investigator. In this regard, it is probably significant that we have recently had the publication of a history of insanity from the point of view of the sufferers and the incarcerated, the details of which to this author at least appear to bear out the contention that enlisting the experimental subject is a sine qua non of fruitful research. It is probably equally significant that perhaps the most comprehensive review of this book in the most orthodox of journals was bitterly critical of the whole enterprise.

Probability assessments now appear to enter into the most intimate areas of our personal functioning shaping the cast of characters and the dialogue on our mental stages. Predictions made from what we know of the judgements of normal individuals in situations of uncertainty account rather well for the neurotic/illness behaviour superstructure of depression and schizophrenia. What has not been done yet is an attempt to map this kind of model onto the neuroses that arise independently of episodes of depression - although the recent cognitive models of panic would appear capable of being formulated in these terms.

Taking a probabilist approach to the neuroses would also bring out their "accidental" origins. This is of significance when interpreting the neuroses, particularly those whose genesis has not involved significant trauma. It would emphasise that these disorders are not an inevitable Freudian story, or the necessary outcome of any constitutional psychaesthenia but rather have their roots in a series of real events, many of which could have happened otherwise.

In terms of precipitation, consider the following. Janet has been criticised for neglecting what for many has been an obvious element of conflict in psychaesthenic states. In contrast Freud saw these states as originating in a conflict over the expression of aggression or sexuality. Both, however, saw obsessional subjects plagued by images of murder or perversion as usually being timid and unassertive. The role of circadian rhythms in cognitive functioning, however, means that images to some extent must arise accidentally by virtue simply of a turnover of their material parts. This brings the spectre of unwelcome possibilities rather than unwelcome impulses into the centre of the personal stage.

Borrowing the idea of sensitivity from Kretschmer, we can postulate that the wrong possibilities at the wrong time in particular individuals may cause problems depending on their understanding of what is happening or the support they can call on. Obviously, there are a lot of conditions here that must be fulfilled if a neurosis is to develop and whether they are fulfilled or not will be a matter of accident rather than the result of inevitability. This accidental quality to a neurosis, its being a result of interactions between an individual and their environment is a good reason for claiming that what is involved is not any degenerate weakness of the psyche but rather something that could potentially happen any of us.

Central to the neuroses appears to be an attempt to manage possibilities. From the post-traumatic startle reactions in response to apparently innocuous stimuli to phobics' de-realisation reactions, obsessionals' rituals or the paranoids' over-conclusive judgements, all neurotics display a fear of what might happen and a loss of tolerance for ambiguity.

Such a vision of the neuroses stands in contrast to Freud's determinism. In psychoanalysis nothing is ever probable or possible. All is determined down to slips of the tongue. There are no accidents. The classic "joke" about analysis is that someone who is late for therapy is resisting insight, even if they were held up by an earthquake or a robbery on the way.

Degeneracy

Machines break down because of internal design flaws not because of the environment. Granted the machine may break down because it has been left out and rusted but even in instances such as this, the implication is that the design was at fault - the designer forgot to adequately rust-proof it. On this basis, the ultimate outcome of a strictly mechanistic approach to human disease is that the machine in question that has broken down must have been degenerate in some way.

This mechanical approach interacts destructively with romanticism. For the romantics, as noted, intelligence was immanent in the original primal stuff. It was not something that resulted afterwards as a product of evolution. Claiming that our ends are in our beginnings inevitably means that when attempting to account for unfortunate outcomes, the romantic approach has had to have recourse to some version of original sin - that the failings of humanity are also immanent in the primal stuff. Some elements of this conception appear to have always tinged

the mechanical notion of degeneracy, leading to the heady cocktails in which degenerate physical functioning has been held responsible for degenerate behaviour.

The various ways in which the machines that are neurotic individuals might be degenerate have been reviewed, from the idea of an aberrant reflex to the psychoanalytic contention that the cognitive moorings of the impulsive engine are inadequate to the job. In all instances, it is the individual's constitution that is in some way being blamed. In all cases this process of blame seems to fit conveniently with the interests of certain social groups.

Since World War 2, the dominant mechanical metaphor has been genetic. There has been an intensive search over recent years to find the genetic faults responsible for both the neuroses and psychoses. There is, however, a radical flaw in this research programme. It stems from the original romantic idea that evolution involves the development from a blueprint. According to this view, the design of the organism is laid down ab initio. It then unfolds and the flaws apparent in the final product are ones that were present in the original design. With the impact of Mendelian genetics, in many respects little actually changed. The popular view became one that one gene codes for one trait - that the overall blueprint was broken down into little bits of blueprint. Aberrant individual traits then ultimately resulted from aberrant genes.

It is now known that this is not the case. There are a multitude of genes that do not code for traits at all. Some regulate the developmental programme. Others may or may not be expressed. In a number of recently recognised cases the environment appears to determine, which genes are expressed and which are not. This is a phenomenon called genomic imprinting, in which the usual process of genetic expression only happens following an environmental input.

More generally, however, genes are ingredients of a recipe rather than bits of blueprint. They are the yeast or the spice rather than bits of a freeze-dried preparation, the addition of water to which produces the final cake. There is no master plan pre-existent anywhere that determines what the final outcome will be. Rather the outcome hinges on the fact that the mixing takes place under preset environmental conditions - a uterus at a certain temperature, with an initial supply of ingredients, most of which on a weight basis are not parts of the genetic code, and with a constant stream of other ingredients being added. The expression of any trait requires the co-operation of a large number of genes and the presence of a large amount of already mixed material.

In a process such as this, genes can only rarely be said to cause disease. Certainly they will contribute to the range of variation in the qualities that we each possess. Particular combinations of qualities exposed to particular sets of accidental circumstances may lead to unfortunate outcomes but this is quite different to saying that there is a design fault.

Some examples may bring this out. In the case of depression, there is evidence that the levels of both steroid and thyroid hormones influence the outcome. It is quite likely that a number of other factors do so also. The genetic input to such factors is therefore liable to contribute to the resolution of the disorder or otherwise. But significantly in these genetic instances, the products of an original genetic input are shaping the outcome of the disorder rather than determining its cause. Such inputs, however, will lead to there being a genetic component to the affective disorders, a finding which seems to lead many to conclude that these disorders are not really environmentally precipitated but rather arise endogenously.

In the case of the neuroses, the only established fact affects alcoholism. Some races produce less of an enzyme, alcohol dehydrogenase than others. This means that one of the breakdown products of alcohol accumulates in the blood - a product that in high concentrations produces nausea and a headache. The result of this is that alcoholism is less common among the Chinese than among Caucasians. In this instance a genetic input positively protects against the disorder rather than provides its ultimate degenerate basis.

Commenting on this view of genetics, in which the older dichotomy of nature and nurture is sidelined in favour of a probabilist view of development, Susan Oyama has emphasised that it will be difficult to give up the idea of genetic determinism as we will then have to face the future and the past without the excuses of original sin or the comforting certainties of either a divine plan or a set of inevitable laws that would allow us predict with certainty what is going to happen next.

IMAGES OF UNCERTAINTY

We also need a view of or definition of the mind that would distinguish it from the psyche. The psyche has been characterised here in terms of internal representations such as images. The operations of the psyche appear to be based on probability assessments carried out in situations of uncertainty. But the first and central image of uncertainty in the book is that neither I nor anyone else can, at present, offer a clear idea of what the mind is. Just as with some of the images in our mind's eye, most of us have some idea of what it is that is needed but cannot guarantee that the details will add up. What is involved is not just attempting to define what the mind is but rather what it is to be human.

I expect it is clear to all but those ideologically committed to an alternative, that the human mind differs from that of animals. That something else has evolved. But trying to pin down what is distinctive about the mind, about being human, is no easy task.

Before Descartes, the issue of relating whatever it was that the mind was proposed to be to its substrates did not arise to confound the picture. Descartes sorted the problem out by locating anything that we feel is distinctly human - such as consciousness, emotions and a capacity for language - in the soul. In this scheme of things, animals were mindless automata. Current evidence points strongly to the unacceptability of this view. Animals appear to possess consciousness, emotions, skills and memory. In The Suspended Revolution, I have proposed that the higher animals possess a highly developed psyche. Virtually everything that we think of as being distinctively human can be found in animals in at least rudimentary form.

What is distinctive to us? There are two bodies of thought and one piece of evidence that can be invoked in support of a contention that the mind is the human faculty that subserves a striving for moral coherence or authenticity. One body of thought is the original Greek formulations of the issue, in which the mind is clearly not a calculating engine but rather is referred to as the "light" of reason, with the clear implication that the proper pursuit for mankind is self-discovery through doing the right thing. The other body comes from the early evolutionary theorists who were concerned to pinpoint how the mind evolved. Their writings make it clear that the issue they were grappling with was not how intelligent problem-solving evolved but rather how morality evolved. The piece of evidence, of course, is the existence of the neuroses, which involve poor problem solving, aberrations of the emotions, memory and perceptual processes but clearly do not involve issues of authenticity.

Based on such considerations, in The Suspended Revolution, I proposed that the mind is an organisation of psychological faculties aimed at authenticity. I have in mind here a strictly material mind. One in which there is nothing other than physical elements and chemical compounds organised according to biological possibilities and conforming also to psychological realities. But equally one that is not determined by such a constitution - one that can operate as a recognisably autonomous entity over a range of chemical, biological and psychological conditions.

One implication of this formulation is that the study of psychology can only be a part of study of man. Just as with the study of biology, it is important to research the psychology of man, and in particular perhaps the psychology of dissociative experiences so that, as Andrew Neher has put it, humans do not pay the price of psychological ignorance with their sanity, happiness and lives. But of equal importance in the study of man will be the study of history, economics, law and the social sciences. These tell us who we have been, shed light on who we are and point us toward who we might be. The study of psychology, even of a depth psychology, cannot replace these other studies, as it has tended to do, becoming in the words of Hans Kung "no longer merely a therapeutic procedure but an instrument of universal enlightenment".

Another implication is that neurotic disorders and inauthenticity are two entirely different things. This returns us to Freud and the mesmerists, who when they failed to correct neurotic disturbances turned instead to programmes to change society. One of the pressing needs we have, I believe, is to get back the notion of a distinctively psychological disorder that does not involve one person pontificating on the adequacy or authenticity of another. The replicable successes of cognitive and behaviour therapies have brought this possibility much closer. What seems needed to complement this is the development of a philosophy of the subject and the question of authenticity.

There are further legal implications in that traditional insanity defences have rested on the notion of mental disease. If, however, the neuroses and with them the most bizarre and serious disturbances of behaviour, such as the borderline disorders or multiple personality disorder are not to be considered diseases, but rather psychological disorders, the notion of responsibility for criminal actions needs reformulation. It is clear from cases such as that of Kenneth Bianchi in this century and Gabrielle Bompard in the past, as well as the handling of shellshock in two world wars and any attempt to formulate a rational justification for American interference in the affairs of other countries in order to eradicate drug trafficking, that such a reformulation will be no easy matter.

Dialectics and Uncertainty

This view of the mind is one that entails a post-Romantic complexity in that the human striving for authenticity is not something that is held to be inherent in the primal stuff but rather is something that has only evolved with humans. This stripping away the blueprints of what we are supposed to be leaves us unsettlingly alone. It is also a view that puts out the light on Rousseau and Kant's vision in which "what is permanent in human nature is not any condition in which it has once existed or from which it has fallen but rather it is the goal for which and toward which it moves". Evolution far from providing a clear indication of where we are heading toward, has produced a situation in which it is up to us to determine what we will be?

In situations of uncertainty such as this, progress and decline will inevitably interplay dialectically. The dialectical process appears to have brought us to what seems like a focal point in history. There is a growing awareness of our responsibility for the environment. There is an increasing recognition of environmental causes of what where formerly thought to be endogenous diseases, such as cancer. There has also in recent years been significant attempts to grapple with the issues of our responsibilities for each other, with statutory and non-statutory efforts to highlight the question of and early treatment of child abuse and even more recently the question of marital rape.

All too often our interventions and discoveries appear to compound the problems. Biological discoveries have been repeatedly used to excuse social arrangements. This has been true of notions of a degenerate reflex as well as asymmetries of the cerebral hemispheres. The notion of intelligence testing has been perverted from its original purpose of assessing the competences of individuals, in order to best tailor an educational programme to their needs, to a programme that has been held to indicate important aspects of the biological makeup of individuals, based on which their fitness to breed or to receive education at all could be determined. Sociobiologists have read entire social structures into the genetic code and speculated about the existence of conformer genes and upwardly mobile genes.

A particularly striking instance of this was the psychoanalytic programme which envisaged man as having only recently contained a basic animality within the slender restraints of civilisation. These barely repressed impulses are supposedly always liable to erupt into the conflagrations of war or indiscriminate and unbridled sexuality. However the truth of the matter on closer inspection seems far more complex with the animal kingdom in no way presenting a uniform picture of bestiality, whereas humans in their dealings with others seem capable of distinctive acts of savagery and cruelty.

The psychoanalytic story as well as illustrating the maxim that a little biological knowledge is a dangerous thing also illustrates the necessity for such knowledge. It has been ecological studies of incest in animals and the development of genetics that most tellingly reveals the flaws in psychoanalysis. The recent discovery of the extensive remodelling of connections between cortical cells in the first few years of life sheds light on the question of childhood amnesia. And closer attention to learning in animal species in ecological settings, as Isaac Marks has indicated, provides clues to the genesis of the neuroses.

Dialectics and Medicine

Modern medicine seems particularly subject to dialectical influences. An increasing proportion of the illnesses we treat are caused by previous drug treatment, while every new drug produced potentially changes attitudes cumulatively in favour of a mechanised medicine, thereby pushing us one step further toward a medical nemesis. The issue of drug treatments should remind us that to understand any dialectical process we must consider the interplay between what is known and whose interests are involved. This returns us to the question first posed by the mesmerists, when magnetism was proscribed by French Academy of Science, whose interests does medicine serve?

This question has had a particular relevance to the issue of the neuroses ever since the mass tranquilization of distress with pharmaceuticals other than alcohol began in earnest during the 1950s. The most recent stimulus to the categorisation of the neuroses into an ever greater number of disorders has come from Donald Klein, who in 1964 suggested that panic disorder

was a distinct entity to agoraphobia. He made the claim on the apparent lack of cognitive features to the disorder. On this basis he suggested that it would be particularly likely to respond to drug treatment. Subsequent studies have demonstrated an effectiveness of imipramine and other antidepressants in subjects with panic- disorder.

Panic-disorder has swept to a position of prominence among the neuroses today. In part, this must be because of the vast amount of research done on it over the past decade. This research has not been done purely out of a disinterested scientific desire to map out the boundaries of a new condition. Rather it has been drug company sponsored, with rather clear commercial interests at stake.

In the 1970s the Upjohn pharmaceutical company produced a new benzodiazepine - alprazolam. By the end of the 1970's benzodiazepines looked an increasingly uncertain marketing prospect. It was at this point that the debate about panic disorder had begun in earnest as in response to Klein's suggestions, one of the committees responsible for drafting DSM III, had to consider whether panic-disorder merited a separate entry into the new classification. The conjunction of this medical debate and Upjohn's interest led to Upjohn sponsoring a series of very large research studies on panic disorder, comparing alprazolam to other drug treatments. This was well funded research. As opposed to the usual funding from research councils, it had extensive provision for conferences and workshops. So well-funded that it was a standing joke among investigators in the mid-1980s to refer to panic disorder as "Upjohn Illness".

What seems to be involved here is a process of drug companies listening out for market opportunities and moving in on them. This Luke Effect is playing a progressively larger part in medical science. The notion of a Luke Effect is adapted from Robert Merton's Matthew effect. Merton has argued that while scientific ideas may be adopted on their merits, all things being equal they get taken up based on the eminence of their proposers or on whether the work comes from Cambridge rather than North Wales for example. The Matthew effect was so named after the parable of the talents in the Gospel according to Matthew, which ends with the moral that to him who has more shall be given but from him who has not, even that which he has will be taken away.

The Luke effect is modelled on the parable of the sower in the Gospel according to Luke, in which seeds are distributed. Some fell on stony ground, some fell on fertile ground but springing up were choked by weeds, while others fell on good soil and yielded up a bountiful crop. The parable ends with the exhortation to those who have ears to listen - which is what drug companies do very well.

Another example may bring home the point. In 1964, Ciba Geigy produced clomipramine, a modified version of their best-selling antidepressant, imipramine. They were left with a marketing problem as clomipramine was no more effective than imipramine but it had substantially more severe side effects. They sponsored a series of studies in which clomipramine was given intravenously in high doses. It was found that it appeared to be in some way anxiolytic, proving of some benefit in phobic and obsessional states.

The market for drugs for phobic anxiety was at this stage, however, targeted for other compounds. Ciba Geigy targeted clomipramine instead for obsessional disorders. All of the research that was subsequently done on drug treatment of obsessional states between roughly

1977 and 1987 in Europe involved clomipramine. Noting this Isaac Marks has commented that as a consequence the impression has built up that clomipramine is in some way specific to obsessional states. The evidence that it is, however, is non-existent.

In the first instance there simply has not been sufficient studies of other agents. In the second, there is clear evidence that clomipramine is useful in other anxiety states, suggesting that it is a non-specific anxiolytic rather than a specific treatment. And, while it is of some benefit the benefits in question are limited. Neither it, nor the subsequent serotonin reuptake inhibitors modelled on it, cure the disorder. They appear rather to make the subject less distressed about their condition, acting in many ways like atypical neuroleptics.

This process goes further than the simple marketing of drugs. The marketing of psychotropic drugs is increasingly constraining psychiatric research and shaping the very concepts we use. Jerome Kroll has taken this one step further and made a case that the categories adopted by DSM III have been significantly influenced by the requirements of the American pharmaceutical and insurance industries.

This particular dialectic appears to have had its origins with the establishment of a recognisably modern pharmaceutical industry in the middle of the last century. Before this there was clearly an increasing degree of therapeutic nihilism in the medical profession as the older humoral theories of disease broke down, taking with them both the rational for medical interventions and a common language shared by both physician and patient.

Far from this leading to a deterioration in health, starting from roughly the same period there was a dramatic improvement in public health. This did not result from advances in medical technology. Rather it stemmed largely from improved nutrition and housing and public health measures. Most of the improvements had taken place by the time specific drug therapies were introduced. Nevertheless the belief appears to have developed that it is the high technology achievements of modern medicine that are responsible for the improvements in our health.

This is of relevance when it comes to psychotherapy. Isaac Marks has suggested that although clomipramine has effects in obsessional disorders, that applying analysis of variation techniques can be called "significant", when compared to exposure therapy its true worth is of marginal significance. Behaviour therapy however does not have the advertising or marketing clout of Ciba Geigy. A clout that is reinforced by the general belief that if a drug helps there must be some underlying biological abnormality that it is mechanically correcting. This is only likely to change in the short term if drug companies acquire the rights to psychotherapy and perhaps even the health services. This variation on the Galbraithian New Industrial State has come within the bounds of possibility given the development of focused and effective psychotherapy packages and the increasing industrialisation of medicine. In the meantime, despite the controversy surrounding the benzodiazepines, the mechanisation of the neuroses proceeds apace.

It would have been easy to say the medicalisation of the neuroses proceeds apace but this is strictly speaking not the case. Another consequence of the demise of the humoral theories of illness has been the loss of a common language shared by doctor and patient. The increasing mechanisation of medicine is seen by many as threatening the fundamental basis of medical therapy, which traditionally has involved in the first instance an empathic witnessing of the existential situation of another and a proscription to do no harm rather than an injunction to be

an effective technician. This possibility is seriously compromised by the loss of a common language. One of our most urgent tasks is the recovery of such a language; a recovery that I believe will require some attempt to put in place a modern definition of what it is to be human.

This not a polemic against modern medicine or the pharmaceutical industry, whose achievements have been more substantial than many of their radical critics care to admit but an attempt to illustrate how uncertainty leads to a dialectical process. There is no unambiguously right or wrong position. This is brought home perhaps by William Osler's definition of the human at the end of the last century, before the development of the modern medico-pharmaceutical complex, when he described us as a species distinguished not by our possession of rationality or language but by our propensity to self-medicate.

This said, it can be noted that the medical-pharmaceutical complex probably also stands at a focal point in the current dialectical cycle. We are close to being able to intervene in our own genetic makeup. The potential to reshape ourselves seems almost within grasp. Given our record at interventions thus far, the outcome of this particular dialectic is unlikely to be an end to history. This potential development symbolises the hazardous nature of the human enterprise. Who are we, what will we be? The dilemmas seem well caught in George Oppen's poem Carpenter's Boat:

The new wood as old as carpentry

Rounding the far buoy, wild
Steel fighting in the sea, carpenter,

Carpenter,
Carpenter and other things, the monstrous welded seams

Plunge and drip in the seas, carpenter,
Carpenter, how wild the planet is.

Carpenter's Boat: George Oppen

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