Current Issues in Clinical Psychology

Volume 2

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Volume 2

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PREFACE

This book is the second volume in the series "Current Issues in Clinical Psychology", which is designed to build into a composite text of the field of clinical psychology.

The contents of the series are based on the post-qualification training conferences held each autumn in Merseyside. These events, organised by a sub-group of the training committee of the Mersey Regional Group of Clinical Psychologists, are unique in that they are the only annual psychology conferences in Britain focussing exclusively on clinical areas.

The opening paper of Volume 1 of the series emphasised the importance of the present disposition towards sustained clinical training for practising psychologists. The series "Current Issues in Clinical Psychology" represents a contribution to this trend by offering practitioners an opportunity to assimilate innovations in clinical theory and practice, in the young but vigorously developing discipline of clinical psychology.

In order to provide a forum for contemporary issues and also to produce complementary texts of lasting value, it has been necessary to carefully select both the theme of each symposium and contributors able to fulfill these aims.

Following the introductory paper, Volume I covered: Legal and Forensic Issues in Psychology; Anorexia Nervosa; Computer Applications and Biofeedback; Internal Events and Depression, and finally, Long Term Care. This volume adds the following areas: Chronic Pain; Mental Handicap and Normalisation; Anxiety Based Problems; Approaches to Aggression and Violence, and Community Psychology. As in the first volume, the papers in this book are presented in the original style of their authors, each section having an introductory chapter to provide a setting for the papers that follow it.

Although the conferences and these books have been designed primarily with clinical psychologists in mind, they will be of value to workers in a variety of disciplines within the helping tradition. The emphasis given by psychologists to training is shared by others in the mental health professions, and there are obvious benefits to be gained from cross-fertilisation between disciplines. Co-operation between psychologists ans sociologists is currently throwing new light on traditional beliefs in mental health care, through a primary focus on the context in which their subjects, both the professionals and their clients exist. In a like manner, contextual issues in learning cannot be ignored. To study in isolation or to examine one perspective without opportunity for considered argument or dissent, is neither in the spirit of true understanding nor of progress. Hopefully, this venture, through the choice of contributors with their different traditions and through the mode of presentation can further these ideals.

In spite of the shortage of training funds currently available to members of the National Health Service, the conference was attended and enjoyed by a large number of people, ranging from new trainees to senior members of the professions. It is to be hoped that this book will bring the proceedings of the second Annual Merseyside Course in Clinical Psychology to a wider audience both in recognition of the importance of, and as a further gesture towards, a more general sharing of knowledge.

Eric Karas

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Special thanks are once more due to Ray Miller in his capacity as Chairperson and to those organizations who helped us to achieve our aims by their financial contributions.

I would also like to convey my gratitude to all those whose papers appear here and also to those others, Michael Bond, Michael Craft, John Copeland, David Hawks and Sam Lipton who participated in the conference but whose contributions, for a variety of reasons, are not included.

To Christine Ellis, for her invaluable practical support in producing the manuscript, I offer my grateful thanks.

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PSYCHOLOGICAL CONTRIBUTIONS TO PROBLEMS OF CHRONIC PAIN: AN INTRODUCTION

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It is increasingly being recognized that clinical psychologists have an important role to play in the evaluation and management of chronic pain. Although psychological contributions to chronic pain problems are established and well developed in the USA and Canada, there are very few clinical psychologists working in the area in Great Britain. A recent survey of pain clinics in Great Britain revealed that of the 50 that responded to the questionnaire, only 4 had active involvement from clinical psychologists (Broome, 1983). All the clinics reported a need for psychological involvement. Interest in psychological aspects of pain is growing; the number of pain-clinics has increased in recent years and demand for psychological help certainly exceeds supply. The purpose of the symposium is to stimulate interest and discussion in psychological aspects of pain and to encourage clinical psychologists to extend their contribution to this new and developing field. The following papers were selected to broadly cover the three areas of theory, assessment and treatment of chronic pain.

Traditional medical approaches to treatment of chronic pain problems are often unsuccessful and inadequate. Such approaches are essentially derived from the nociceptive model of pain which assumes that the experience of pain is a neurosensory event that reflects tissue damage and is therefore triggered by a nociceptive stimulus. Severity of pain is thus proportional to the extent of tissue damage. The treatment interventions that follow this model attempt to reduce the tissue damage directly or interrupt the transmission of impulses emanating from the damaged tissue, so that the perception of pain is eliminated or reduced. Many medical interventions have evolved from these assumptions. Whilst the usefulness of this model is not disputed for acute pain, it is inadequate for chronic pain problems.

Experience of pain is not necessarily proportional to the extent of tissue damage. Many patients with long-standing severe and disabling pain have no known physical pathology. Other patients with obvious physical pathology report little or no pain with minimal functional disability. Beecher (1960) notes:

> "Many investigators seem grimly determined to establish - indeed too often there does not seem to have been any question in their mind - that for a given stimulus there must be a given response; that is, for so much stimulation of nerve endings,so much pain will be experienced, and so on. This fundamental error has led to enormous waste..... it is evident in work in our laboratory that there is no simple relationship between stimulus and subjective response. It is also made evident that the reason for this is the interposition of conditioning, of the processing component, of the psychic reaction. It is clear that this component merits and must have extensive consideration. It must be taken into account no only for pain but for all subjective responses"

To the extent that experience of pain cannot be accounted for solely by physical pathology, psychological factors emerge as prominent in evaluation and management of patients.

P. Slade's introductory paper reviews the main theories of chronic pain phenomena which have formed the basis for clinical assessment and treatment and is important in distinguishing between chronic and acute pain. Ziesat (1981) noted:

> "The distinction between chronic and acute pain is important, because the two phenomena are different disorders. Acute pain serves the purpose of altering the person that damage has been done to the body and, therefore requires treatment. After the person has been to the bodily damage, the pain serves no further constructive function, this is the point at which chronic pain begins. That is, rather than being just a symptom of a disease, chronic pain becomes a disorder in and of itself"

Chronic pain, usually defined as occurring for more than six months, is frequently characterized by desynchrony between sensory and emotional components of pain. Sufferers tend to report high levels of pain which are not relieved by traditional approaches. As chronicity progresses, the problems often become more elaborate and the patient may complain of two or more pain problems unrelated to the primary pain complaint. Subjective pain complaints, medication use and limitations of functional activities all tend to be in excess of those expected on the basis of demonstrated physical pathology. Affective disturbances may occur. A pattern of "vegetative" signs

may emerge with sleep disturbance, appetite changes, decreased libido, irritability, withdrawal of interests, weakening of relationships and increased somatic preoccupation. Driven by hope and desperation, the pain sufferer may develop totally unrealistic expectations of treatment and embark on a fruitless search for a "miracle" cure which will not only remove the pain but also all the emotional, behavioral and social problems which inevitably have accompanied their experiences. Despite many consultations with different experts, often resulting in multiple surgeries, despite excessive medication use, rest and avoidance of anything thats seems to make the pain worse, the pain persists doggedly and unabated. If physical causes for these major changes in behavior and experience cannot be found, then the sufferer may be considered to be suffering from "pathogenic" pain, "conversion reaction", "hypochondria" or, at the very least, to be showing considerable "functional overlay".

Psychological tests have been developed to differentiate between patients suffering from "functional" and "organic" pain. P.Slade's paper contains a review of this application with particular reference to studies investigating the diagnostic value of the MMPI. The point that organic and functional disability are not mutually exclusive is worth emphasizing. Psychological tests are good at diagnosing and predicting psychological disturbances which can occur in the presence or absence of physical pathology; such disturbances may be related or unrelated to physical pathology. It follows that performance on psychological tests should not be used to select patients for physical treatment. The functional/organic dichotomy is most usefully regarded as a continuum.

What determines an individuals' position along such a continuum? Why do some chronic pain sufferers respond to treatment and others do not? Why does functional impairment vary in patients with similar pathology? without doubt, theories of chronic pain based upon learning principles have had the most impact, both in terms of providing a clear understanding and a basis for intervention. These theories emphasize alternative ways of conceptualizing clinical pain. Sternbach (1968) has said:

> "In order to describe pain, it is necessary to conceive of it as a set of responses ... a person must do something ... in order for us to determine that he is experiencing pain"

Fordyce (1973) notes:

> "Diagnostic inferences and treatment judgements about clinical pain are based predominantly on information from the patient in the form of his pain behavior. He says he hurts. He describes the pain experience. He grimaces, holds a painful body part, asks for analgesics or stops an activity to rest because of his pain"

Anything a person says or does that is identified by observers as indicative of pain, is pain behavior. Fordyce (1973) has applied principles of operant conditioning (Skinner, 1953) to the problem of chronic pain. According to this analysis, pain behavior may either be "respondent" or "operant". Respondent pain behavior is primarily generated and influenced by some underlying nociceptive stimulus and is reflexive and automatic in nature. Operant pain behavior, while capable of being elicited by antecedent stimuli, is also subject to influence by consequences. If an operant if followed by a positive consequence (for example, praise, attention, sympathy), that behavior is more likely to occur in the future. When an operant is followed by a negative consequence (for example, loss of verbal reward), that behavior is less likely to occur in the future and behavior designed to remove the negative consequences, or avoid it, is likely to increase. In some cases, pain behavior may come under control and the problem is said to be one of operant pain. The development of operant pain relates mainly to the interaction between the patient's pain behaviors and events in their environment.

Treatment of the problem involves firstly identifying the extent to which pain behaviors are "respondent" or "operant". These two alternatives are not mutually exclusive - clinical experience indicates that some mixture of the two is common. Although one may be tempted to draw a parallel between this analysis and the older diagnostic categories of "organic" or "functional", there are important differences between these two approaches. The notion of viewing pain behavior as respondent, operant or some mixture of the two, firmly directs diagnostic inquiry into the relationship between behavior and the environment. Treatment follows naturally from this behavioral analysis. On the other hand, identifying an individual as suffering from either "organic" or "functional" pain merely restates the common finding of desynchrony between sensory, emotional and behavioral aspects of pain without offering any specific implications for treatment.

Behavioral treatments for chronic pain, based upon principles of operant conditioning, are reviewed in A. Broome's paper. Essentially, these treatment programs aim to decrease destructive learned pain behaviors and replace them with adaptive behaviors by systematically identifying and modifying the reinforcement contingencies so that pain behaviors are no longer reinforced while desired behaviors are. The literature examining the effectiveness of behavioral interventions has revealed that many patients do significantly increase levels and reduce their use of medication. Some studies have demonstrated that subjective ratings of pain also improve (shown by Cairns et al., 1976 and Seres et al., 1976) and that improvement in these measures are sustained in follow up studies (shown by Seres et al., 1977). Typically, these treatment programs use a variety of treatments (group therapy, physical therapy, operant conditioning, relaxation) so that their result reflect overall programs effects

rather than those of behavioral strategies alone. In addition, learning theories of pain fail to account for the experience of pain and ignore important cognitive and physiological factors, both of which may exert a strong on the perception of pain.

Attempts have been to incorporate the role of cognitive variables into a behavioral model of pain. The fear-avoidance model of exaggerated pain perception (Slade, 1983) incorporates cognitive variables into an essentially behavioral perspective by accounting for individual differences in pain experience and pain behavior in terms of a continuum of confrontation/avoidance strategies. P. Kirkby's paper describes a cognitive behavioral approach to chronic pain problems. He focuses on the similarities between chronic pain and phobic disorders and argues that chronic pain is associated with a motivational-affective dimension which can maintain the sensory dimension and is associated with the response to direct or indirect threat.

C. Main's paper introduces the problem of assessment of pain. His thesis is that failure to understand the nature of pain communication has been responsible, to a large degree, for the failure to understand chronic pain. He presents a theoretical analysis of the nature of pain communication followed by a empirical study of 200 patients suffering from chronic low back pain. He describes a method of differentiating objective physical characteristics from characteristics having psychological importance. Central to this analysis is "magnified illness presentation in the form of inappropriate responses (signs) to physical examination and reports of symptoms which are vague, ill-localized or lack the normal relationships to time, physical activity and anatomy" These inappropriate signs and symptoms are also associated with depressive symptomatology and heightened somatic awareness. Main emphasizes that magnified illness behavior follows naturally from failure to relieve pain, inadequate coping strategies and patterns of escape or avoidance behavior. He concludes that surgery should only be considered for those patients with clear-cut pathology and little psychological distress. Patients identified as exhibiting psychological distress should be treated appropriately by the multidisciplinary team. Whilst this approach represents a considerable advance in the assessment of psychological distress in chronic orthopedic conditions, its application to other clinical conditions is open to question. In particular, the diffuse symptomatology and uncertain pathology associated with so many chronic pain problems may make it difficult to determine whether a particular set of signs and symptoms are appropriate or inappropriate. In other words, does the presence of inappropriate signs and symptoms indicate psychological distress or some form of physical pathology as yet undetected? One wonders how relevant Teuber's dictum, that "absence of evidence is not evidence of absence", is in the diagnosis of chronic pain states. The situation is further compounded by the role that social, cultural and psychological factors play in the expression of pain.

M. Humphrey's paper emphasizes the importance of family dynamics in assessment of pain behavior prior to behavioural intervention. He describes how, in some cases, the spouse colludes and actively maintains sick roles and pain behavior. The patient's dependence, passivity and functional inactivity reward the spouse in "endlessly reverberating circuit" that can prove to be extremely difficult to break.

A. Broome's paper reviews the various psychological approaches to treatment of chronic pain problems which have been applied to both "organic" and "functional" problems. Psychological treatments are usually categorized into three related and overlapping areas; physiological, cognitive and behavioral in recognition of the important influences that these variables have in pain perception.

Physiological approaches to treatment, which include relaxation training and biofeedback. aim to reduce physiological arousal and by doing so, reduce the perception of pain. Increased physiological arousal (for example, caused by muscular tension) can arise directly as a response to a stressful experience. If arousal is sustained, this can lead to pain which causes more stress and resulting muscle tension, and eventually, more pain. The familiar pain - tension - pain vicious cycle may develop. Pain, of whatever cause, is a stressful experience and consequently this vicious cycle is very common in pain syndromes caused as a direct result of external stress or internal stress resulting from some underlying physical pathology. The aim of treatment, in both cases, is to help the sufferer control or modify some over-reactive physiological response system (usually muscle tension or spasm) which is either causing or exacerbating pain. Relaxation training, anxiety management techniques, autogenic training and biofeedback have all been used for this application. Most of the research in this area has addressed tension headaches (Philips, 1976) although a small number of studies have looked at other musculoskeletal pain syndromes such as myofacial pain (Budznski and Stoyva, 1973; Dohramann and Laskin, 1978), chronic neck and shoulder pain (shown by Hendler et al., 1977) and low back pain (Nouwen and Salinger, 1979). Although assessment measures, treatment variables and patient characteristics vary, making comparions difficult, most studies demonstrate that relaxation training and EMG biofeedback significantly reduce pain ratings. It has not been adequately demonstrated that EMG biofeedback offers any clear cut advantages over more conventional relaxation procedures.

It is a common assumption that elevation of EMG levels in key muscle groups and behavior motivated by pain are highly associated and that reduction in muscle tension produces corresponding reduction in pain ratings. Recently, a number of studies have suggested that reducing EMG levels does not necessarily entail synchronous reductions in pain experience or behavior. Philips and Hunter (1981) failed to discover the assumed relationship between tension levels

and severity of headaches in tension headache sufferers. 40% of a severe tension headache group showed no tonic abnormality. Other studies have shown that EMG levels cannot reliably differentiate migraine and tension headache sufferers. Stenn (1979) treated a group of myofacial pain dysfunction patients with progressive relaxation techniques and EMG biofeedback. He reported that, despite reports of lowered pain levels after treatment, the level of muscle tension did not appear to be lowered. Dohrmann and Laskin (1978) treated myofacial pain EMG biofeedback of masseter muscle activity. Subjects treated with feedback reported marked pain reduction and improved ability to open their mouth without discomfort. Again, however EMG data were inconsistent with self report and other pain measures. Variations in EMG levels did not correspond with pain levels. Nouwen and Salinger (1979) compared EMG biofeedback assisted relaxation with no-treatment controls in a group of low back pain sufferers. The biofeedback group showed significant decreases in subjective pain estimates and EMG levels with no change in the control group. Pain decrease and reduction in EMG levels, however, appeared to be independent. EMG levels steadily increased when biofeedback training was finished and returned to pre-treatment levels at 3 month follow-up. Decreases in pain ratings were maintained. The authors attributed the independence of EMG levels and pain ratings to the sense of self-control which the patients who had received biofeedback training had gained. The patients learned that muscle tension levels, and thus pain, could be controlled and this pain control continued even in the absence of continued muscle tension control.

These studies demonstrate, that although relaxation and related procedures do significantly reduce pain ratings, these is not always a clear correlation between levels of muscular activity and pain. Why do these procedures work? Perhaps the major importance of the gate control theory of pain (Melzack, 1973) is that, more than any other theory, it emphasizes the major role of psychological variables and how they affect reaction to pain. Attitudes, beliefs and expectations people maintain in certain situations can determine their emotional and behavioral reactions to those situations. It may be that the true importance of relaxation and biofeedback, as applied to problems of chronic pain, lies not so much in the reduction of muscle tension but, more generally, in emphasizing the individual's own ability to control, regulate and master bodily response previously associated with pain, anxiety and helplessness. There is some experimental evidence for this proposition. Melzack and Perry (1975) compared alpha biofeedback, hypnotic training (including relaxation and ego strengthening techniques) and a combination of the two in group of mixed chronic pain patients. All patients managed to increase alpha output but only the combination of biofeedback and hypnotic training resulted in significant reduction of pain. They concluded that the pain relief was not due to alpha feedback as such, but was related to distraction of attention, suggestion, relaxation

and a sense of control over pain which are an integral part of the procedure.

The notion that an individual's cognitive attitudes, beliefs and mood can result in distress and enhance the perception of pain forms the basis for cognitive treatment of chronic pain. Cognitive strategies essentially attempt to modify pain experience by modifying cognitions. Patients are taught to identify distorted beliefs and substitute more positive thoughts. They may be taught imagery, distraction, relabelling of sensations and relaxation. Hypnotic strategies may be used to modify individuals to the perception of pain once it has occurred. A review of studies looking at the effectiveness of cognitive treatment strategies for chronic pain is found in A. Broome's paper.

Chronic pain is an awesome problem that not only causes anguish for the individual but also represents an expensive drain on society. Bonica (1980) estimates that 86 million Americans suffer with some form of chronic pain. The cost includes futile hospitalization, surgeries and medication as well as the financial consequences of functional disability in terms of lost days at work, loss of income and disability payments. DHSS (1979) figures show that £220 million is lost in output every year and $40 million is pain in sickness, invalidity and disablement for back pain alone. Traditional medical approaches are often not successful and psychological factors are clearly implicated in the genesis and maintenance of many chronic pain problems. The papers that follow outline some of the main psychological theories, assessment procedures and treatment methods that have been developed in recent years.

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THE COMMUNICATION OF PAIN AND DISTRESS IN CHRONIC ORTHOPAEDIC CONDITIONS

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INTRODUCTION

Chronic backache presents a major challenge to modern medicine for despite increasingly sophisticated technology, only a proportion of patients gain relief. Not only are many patients unimproved after treatment, but a significant number become worse. Patients with comparable levels of physical impairment present with wide-ranging levels of functional disability (Waddell and Main, 1984), and response to treatment bears no clear relationship to extent of physical impairment. There have been attempts to explain such anomalies in terms of mental illness, but chronic pain patients, in general, bear little resemblance to psychiatric populations and on psychiatric inventories appear indistinguishable from the normal population. Since the 1950's there have been attempts using the MMPI (Dahlstrom and Welsh, 1960) to describe the "missing link" in terms of personality structure (Hanvick, 1951; Sternbach et al., 1973; Wiltse, 1975; Calsyn, Louks and Freeman, 1976; Doxey et al., 1979) but a number of controversies surround the interpretation (Bradley et al., 1978).

It is the basic contention of this chapter that failure to understand the nature of pain communication has been responsible to a large degree for the failure to understand chronic pain. A theoretical analysis of the communication of pain and distress is followed by an empirical study of 200 consecutively referred chronic low back pain patients, both problem and GP referrals, seen at a problem back clinic in the West of Scotland. The empirical findings have importance not only for the understanding of pain communications, but also for investigations of the relationship between physical and psycho-

logical perspectives in chronic pain. The implications of the results for the assessment of psychological factors in chronic pain patients are then discussed.

THEORETICAL CONSIDERATIONS

The Nature of Pain

Much of the current confusion about chronic pain seems to have its origin in uncertainty about the nature of pain itself. Such uncertainty dates at least since the time of Plato, but became focused at the end of the nineteenth century when advances in physiology seemed to show that pain was a specific sense linked to a specific nerve path. Marshall (1894), however, following Bradley (1888) insisted that pleasure and pain were mere aspects of experiences and Head (1920) made the clear distinction between "discomfort" and "pain". This division between the emotional and sensation elements in the concept of pain anticipated recent statistical analyses of the rating of pain (see below). Confusion between a postulated pain stimulus and the sensation of pain is clearly evident in the work of Beecher (1962) and discussed in detail (Trigg, 1970, pp. 74-79). The emotional reaction to pain has been further subdivided into distress at the pain itself and anxiety at its significance (Trigg, 1970 p. 77). It is clear then, that at the very least, the concept of pain can be considered in terms of pain stimuli and associated physiological, biochemical and anatomical pathways, and the sensation of pain. The sensation of pain can be further subdivided into a sensory component and at least one emotional and perhaps evaluative component. Finally one can consider the reaction to pain. Thus, "Included in the category of reaction to pain are not only disagreeable feelings, vocal and facial expressions of displeasure and alterations in sweating in the skin, but also , for example the elevation of blood pressure.....Tachycardia and tapping of the feet are other reactions" Wolff and Wolff (1958, p. 21).

It is only against such a bewildering background that communication about pain can be understood.

The Nature of Pain Communication

Of fundamental importance to the understanding of the nature of communication is the distinction between the personal and private sensation of pain, and the report of the experience. In order that an experience can be described to another person, it has to be named. According to Kenny: "A name functions as a name only in the context of a system of linguistic and non-linguistic activities" (Kenny 1973, p.160). Thus, a name is comprehensible only because of a system of shared meanings and rules about language usage. Vocabulary, syntax

and grammar comprise the internal structure of language, but in order that such signs can facilitate communication, individuals have to learn how to apply these unambiguously, and there are rules governing not only the naming of objects, events and sensations but also governing the use of the utterances themselves. An important part of learning to communicate is the learning of such rules.

When a mother sees a child fall down, graze his knee and start to cry, she is in no doubt that the child is in pain and she can then communicate with him about the pain. In such a way the child gradually learns to distinguish among various sensations and acquires the elementary rules about the communication of pain. Within a particular sub-culture, a generally agreed set of definitions is promulgated. The child also learns appropriate behaviors for pain sensations of different quality and intensity. In some situations (e.g. a hand coming into contact with a hot stove) the course of action may be clear. Furthermore, the description of the nature of pain experience will be fairly straight-forward since, in the immediate situation, the context in which the pain event has occurred will be evident to all those present and communication about the event will be unlikely to be misunderstood. In many other contexts of pain experience there is no clear cut pain event and communicating about pain becomes more problematic. The ranges of sensation, both in quality and in quantity, are so extensive the language can at best only approximate to them.

The Pain Patient

In many cases of acute pain, which may be unpleasant but is not perceived by the patient as likely to be of undue significance, it is relatively easy for the pain patient and the doctor to agree about the severity of the problem,discuss the treatment options and arrive at an amicable agreement about the best course of action.

When a patient presents repeatedly with pain, however, and the pain becomes defined as "chronic", the doctor and patient may come to attribute differing significance to the pain communication.

In a society in which the individual's pain communication can be authenticated or legitimized by the medical profession, and in which some alleviation of possible financial hardship may be obtained through such authentication, the possibility immediately arises that an individual, by the illegitimate use of pain communication, may attempt to derive the compensation, which a humane society permits to the sufferer, when no real pain exists. Terms such as 'imaginary pain' in common parlance, or 'malingering' in medico-legal practice have bedevilled our understanding of chronic pain and the concomitant set of pain communication or illness behaviors. To suggest that someone is suffering from imaginary pain is to question the legit-

imacy of their experience (suggesting that they are at best hypochondriacal or at worst insane) or the legitimacy of their pain communications. Attributions such as 'hypochondriacal' and 'imaginary' are often best seen as statements of frustration on the part of the medical practitioner.

It is not an infrequent occurrence for the situation to be reached when mutual mistrust develops between doctor and patient. In order to understand this phenomenon it is necessary to consider the language-games or 'forms of life' within which each of the participants has become embroiled.

The Medical Model

That such a misunderstanding can arise is partly the result of the medical model currently in vogue. Much modern clinical practice is based on Virchow's concept of cellular pathology:

Virchow's Concept of Cellular Pathology

1. Recognize illness behavior - signs and symptoms
2. Infer underlying pathology - diagnosis
3. Treat underlying pathology
4. Expect illness behavior to improve

Thus, the task of the clinician first and foremost is to arrive at a diagnosis on which treatment can be based. For many diseases (particularly acute conditions) this disease model is appropriate and of considerable utility. The method is of interest not only for clinical practice but also for the nature of clinical inquiry. Implicit is a causal model implying a pathway from, perhaps, a localized site of tissue damage, at which pain receptors transmit pain impulses through the peripheral pathways, to the central nervous system itself, where cortical activity is experienced as a painful sensation which itself instigates a series of events designed to terminate the noxious stimulus (reflex arcs may also be involved). The psychological, anatomical and biochemical mechanisms involved are not of concern at the moment. Of interest, however, are the constraints placed in the medical practitioner by the adoption of such a model.

A theoretical framework is necessary which permits classification of patterns of individual signs and symptoms into disease entities. For many conditions this is not a difficulty but for patients with chronic backache, problems quickly arise. It is well recognized clinically that patients showing comparable levels of physical impairment differ widely in the resulting disability and in self-rated estimates of pain severity. It would appear necessary to go beyond the Virchowian model in order to explain such discrep-

ancies. In fact, since the beginning of the century physicians, frustrated at the failure of medical science to provide satisfactory treatment for certain signs and symptoms, have in general supported the distinction between functional and organic illness; but while physical signs and symptoms indicative of clear-cut organic pathology have been fairly well identified and described, the identification of the presenting characteristics of functional disorders has been fraught with difficulty. Indeed, the diagnosis of 'functional' has frequently been ascribed by exclusion of physical pathology considered commensurate with the pattern or extent of presenting signs or symptoms. The history of psychosomatic medicine in this century bears testament to the succession of despairing theoretical reformulations of patterns of signs and symptoms in an attempt to construe them under the "illness" rubric. Had the profession of psychiatry been successful either in communicating its ponderous theorizing to the general medical fraternity, or in treating psychiatrically such 'functional' patients, then the necessity for investigating the nature of the communication process might never have emerged.

It is necessary to reconsider at this juncture a possible explanation for the failure of the medical model to deal particularly with the case of chronic pain. It is assumed that the reporting of pain can be understood unambiguously as a symptom of pathology. For such to be the case two assumptions are necessary. It has to be assumed firstly that the causal model involving the transmission of pain impulses is sufficient, and secondly that the report of pain is directly proportional to the pain experience. It is known, however, that pain threshold is determined also be attentional factors (Blitz and Dinnerstein, 1971) emotive imagery (Horan and Dellinger, 1974) and cognitive style (Davidson and Bobey, 1970; Neufeld and Davidson, 1971); and the report of pain is known to be affected by emotional factors (Schalling and Levander, 1964; Woodfords and Fielding, 1970; Sternbach, 1974; Bond, 1980).

Medical Language Games

When the chronic pain patient reports pain to their doctor, the physician may attempt to assess the intensity of the pain as part of an overall assessment of severity of illness. At the simplest level, the magnitude of a patient's rating of pain on an intensity level, as on a visual analogue scale, may be taken as a representation of the extent of a patient's pain experience. Leaving aside the question of whether it is possible to represent what may be a fluctuating condition numerically or graphically on a scale (Chapman, 1976), there is an implicit assumption which needs questioning. The doctor may be quite clear what they mean by pain intensity and may have normative figures by which they can compare patients on such a rating. The patient, on the other hand, may try to represent the overall impact of the pain on his or her life. In such a situation,

a communication problem has arisen, a mismatch in language games has occurred. Indeed, the importance of attempting to distinguish quantitative and qualitative aspects of pain, discussed above, has been shown by studies using the McGill Pain Questionnaire, (Melzack, 1975; Graham et al., 1980; Prieto et al., 1980) part of which permits the differentiation of sensory, affective and evaluative components of pain on the basis of lists of verbal descriptors. Although there are considerable problems in the use of the scale (Main et al., 1982), a low sensory and high affective score, for example, would certainly suggest that the rating of pain would seem to be much more than an easily interpreted estimate of physical severity. The identification of emotional components would also seem to be possible using the Pain Drawing (Ransford et al., 1976) which consists of outlines of the body (anterior and posterior) on which the patient is asked to represent location of pain using a variety of symbols which denote different types of pain experience. Although the scoring system would appear to be somewhat unsatisfactory (Main et al., 1983c), it seems to identify a subgroup of patients in which there is an emotional component in their pain presentation.

In conclusion, analysis of the nature of pain communication would appear to be essential to the understanding of chronic pain. A study bearing some relevance to these critical issues will now be reported.

PURPOSE OF STUDY

The study is in four parts:-

1. The prediction of severity of illness, as represented by functional disability.
2. Comparison of pain ratings and other psychological variables in the prediction of severity.
3. Investigation of the influence of gender, functional disability, socio-economic and occupational factors on the major psychological variables.
4. Examination of the nature of magnified illness presentation as represented by inappropriate signs and inappropriate symptoms.

METHOD

Selection of Subjects

The patients in the study have been described in detail elsewhere (Main and Waddell, 1982). Briefly, the 200 subjects all suffered from chronic low back pain (duration more than three months) related to mechanical derangement of the lumbo-sacral region resulting from trauma and/or degenerative change. All patients were seen

at the Department of Orthopaedic Surgery at the University of Glasgow and consist of 70 primary referrals (GP backs), referred directly from their general medical practitioners, and 121secondary referrals (problem backs), referred from other (mainly orthopaedic and neurosurgical) hospital consultants to the Problem Back Clinic. Patients were aged 18-55 years, had no history of serious spinal disease, had no concurrent serious physical disease or major psychiatric disorder, were born in the United Kingdom with English as their first language and were able to read and write. Of the initial 332 patients, 34 (10.2%) were excluded because of age, 25 (7.5%) because of difficulties with language, comprehension or compliance and 73 (22.0%) because of spinal pathology (tumor, infection, inflammatory disease, spondylolistheses and osteoporotic or traumatic fracture). The patients otherwise were consecutive referrals and typical of low back pain patients.

Choice of Variables

For the first part of the study a specially constructed and validated 10 item index of functional disability (Waddell and Main, 1984) was used since it is the measure of severity of illness of particular interest in evaluation of outcome of treatment and in medico-legal practice. Objective physical characteristics were represented by a set of seven variables (Waddell and Main, 1984). This new scale (OPC) replaced the physical impairment scale described previously (Main and Waddell, 1982). "Mood" was assessed using a slightly modified version of the Zung Depression Inventory (Zung, 1965) and the Modified Somatic Perception Questionnaire or MSPQ (Main, 1983a). Magnified illness presentation was assessed by scales measuring inappropriate signs (Waddell et al., 1980) and inappropriate symptoms (Main and Waddell, 1982).

For the second part of the study, general personality structure was assessed using the EPQ (Eysenck and Eysenck, 1964), giving measures of 'neuroticism', 'extraversion', 'psychoticism' and a 'lie scale'; and a locus of control using a new locus of control questionnaire (Cooke, 1980) - a 16 item dichotomous questionnaire corrected for social desirability bias and focused on personal rather than political control. Hypochondriacal fears and beliefs were assessed using three of the seven scales of the Illness Behavior Questionnaire or IBQ (Pilowsky and Spence, 1976) giving measures of general hypochondriasis, affective disturbance and affective inhibition. The other four scales are statistically suspect (Main et al., 1984).

In the third part of the study, duration of symptomatology, amount of work lost through backache, physical demand of the job (work/type) and social class were included.

In the fourth part of the study, the sexes were considered separately.

Statistical Methodology

In view of the multivariate relationships involved it was decided to use multiple regression as the main statistical method. It has procedures directly equivalent to analysis of variance techniques and permits the inclusion of nominal or ordinal variables coded as dummy variables (Cohen and Cohen, 1975). In each table, the percentage of change in R^2 is used as the measure of increase in prediction of the particular dependent variable(s) by the independent variable(s) concerned. The significance levels refer to the F-ratio based on the proportional reduction in unexplained variance achieved by the addition of the variable(s) concerned. Differences in statistical procedure among the four parts of the study will be explained in the discussion and interpretation of the results.

RESULTS

1. First Part

The influences of ratings of pain in the production of functional disability are shown in Table 1. The dependent variables are (separately) the Pain Scale and the Pain Drawing. The table illustrates the increase in prediction achieved by introducing the dependent variables at different points in the regression equation. In this case, the seven variables representing objective physical characteristics were introduced at the same step. Mood refers to depressive symptomatology and somatic awareness, introduced together. Illness presentation comprises inappropriate signs and symptoms, again introduced jointly into the regression equation.

When placed first in the multiple regression equation (stage 1) ratings of pain accounts for 14.7 and 20.3% respectively (for scale and drawing). After sex differences are controlled statistically (stage 2), the figures fall to 12.6 and 15%. Controlling for differences in objective physical characteristics (stage 3) drastically reduces the utility of the pain ratings which, although still making a statistically significant contribution, add only 2.5 and 1.5% to the overall prediction of disability. The addition of mood scales (stage 4) and magnified illness presentation (stage 5) render the additional contribution of pain ratings completely worthless. Thus, although ratings of pain correlate highly with disability, the relationship would seem to be explained almost entirely by differences in sex and in the objective physical characteristics of the illness.

Table 1. Self Rated Pain and Severity of Illness.
Dependent Variable : Disability (Main study, n = 200).

Place in Regression Equation	Pain Scale $\%R^2$ Ch.	Sig.	Pain Drawing $\%R^2$ Ch.	Sig.
1. First	14.7	.001	20.3	.001
2. After sex	12.6	.001	15.0	.001
3. After sex and objective physical characteristics	2.5	.01	1.5	.05
4. After sex, POC and mood	0.5	NS	0.3	NS
5. After sex, OPC, mood and illness presentation	0.1	NS	0.1	NS

$\%R^2$ = Percentage change in R^2 with addition of the item or class
Sig = Significance of proportional reduction in unexplained variance.

2. Second Part

The relative importance of general personality variables and hypochondriacal fears and beliefs are shown in the first part of Table 2.

In this table, order in the regression equation is presented horizontally and the alternative classes of independent variable are presented vertically. It must be stressed that in this table the $\%R^2$ represents the power of each of the classes of variables when entered. either first or after sex and objective physical characteristics, into the regression equation, with disability as the dependent variable.

General personality variables account for only 9.8% of the variance and much of this is explained by neuroticism; when entered at the third stage, the figure drops to 4.1%. It has been shown elsewhere that neuroticism is redundant if depressive mood and somatic awareness are considered first (Main, 1984).

Hypochondriacal fears and beliefs also account for a relatively small amount of variance and are of no incremental value when current psychological distress is taken into account (Main, 1984).

Depressive symptoms, heightened somatic awareness, inappropriate signs and inappropriate symptoms add between 13.4 and 21.1% to the overall prediction. The comparable figures for the pain scale and pain drawing are 2.5 and 1.5%. It would appear then that pain ratings, general personality traits and hypochondriacal fears and

Table 2. General Personality, Magnified Hypochondriacal Fears, Mood and Illness Presentation in the Prediction of Disability. (Main study, n = 200).

Dependent Variable	Disability			
Place in regression equation	First		After sex and objective physical characteristics	
Independent Variables	$\%R^2$ Ch.	Sig.	$\%R^2$ Ch.	Sig.
General Personality	9.3	.001	4.1	.05
Hypochondriacal fears and beliefs	6.1	.01	4.6	.05
Depressive symptoms*	23.4	.001	13.4	.001
Somatic awareness*	26.5	.001	21.1	.001
Inappropriate signs	30.5	.001	13.4	.001
Inappropriate symptoms	38.0	.001	16.2	.001

* Includes interaction term for interaction with sex
$\%R^2$ = Percentage change in R^2 with addition of the item or class
Sig = Significance of proportional reduction in unexplained variance.

beliefs add little to he understanding of functional disability. "Mood" and magnified illness presentation by contrast are much more important.

3. Third Part

The influence of gender, functional disability, socio-economic and occupational factors on the four major psychological variables is shown in Table 3. The alternative psychological variables are presented horizontally. The independent variables were entered in order shown. In this model the additional contribution of the social variables is presented (after differences in sex, objective physical characteristics and functional disability have already been taken into consideration).

As far as depressive symptomatology and heightened somatic awareness are concerned, only sex and disability are of importance. (The relatively large but non-significant contributions of objective physical characteristics are statistical artifacts explained by the large number of variables in the class and the use of dummy variable coding (Cohen and Cohen, 1975)).

For inappropriate signs, both objective physical characteristics and functional disability are of importance, while for inappropriate symptoms, sex differences are also of significance.

Table 3. The Influence of Objective Physical Characteristics, Disability, Socio-economic and Occupational Factors on Psychological Variables. (Main study, n = 200).

	Dependent Variables							
	Depressed mood		Somatic awareness		Inappropriate signs		Inappropriate symptoms	
Order in Regression Equation	$\%R^2$ Ch.	Sig.	$\%R^2$ Ch.	Sig.	$\%R^2$ Ch.	Sig.	$\%R^2$ Ch.	Sig.
Sex	3.8	.05	7.9	.005	2.6	NS	7.7	.005
Objective physical characteristics	10.5	NS	9.8	NS	19.1	.01	20.2	.01
Disability	13.9	.001	16.0	.001	17.3	.001	19.3	.001
Duration of symptoms	1.6	NS	0.0	NS	0.0	NS	0.0	NS
Time off work	0.0	NS	0.1	NS	0.0	NS	0.0	NS
Social class and work type	3.3	NS	7.9	NS	3.7	NS	2.8	NS

$\%R^2$ = Percentage change in R^2 with addition of the item or class
Sig = Significance of proportional reduction in unexplained variance.

Differences in duration of symptoms, time off work, social class and work type do not appear to increase our understanding of any of the four psychological variables. Socio-economic and occupational influences, however, will be the subject of a further study and it must be admitted that their apparent insignificance in the present study may be attributable in part of inadequate sampling of social variables and the use of a small number of individual variables (in contrast with the carefully constructed scales used in the rest of the study).

4. Fourth Part

The hazards of inferring causal relationships from correlation or covariation are well known, but when considering the relationship among medical and psychological variables, a certain asymmetry in likely causality permits at least a cautious attempt at modelling. Thus, it seems reasonable to infer that physical damage may lead to both disability and changes in current psychological state, but that psychological distress could cause actual damage is implausible. The causal relationship between functional disability and mood, on the other hand, may well work in both directions, in that while increasing disability may well affect mood, distress (for whatever reason)

Table 4. The Nature of Magnified Illness Presentation. The Influence of Objective Physical Characteristics, Mood, Disability and Social Factors.

Order in Regression Equation	Inappropriate Signs Males $\%R^2$ Ch.	Sig.	Females $\%R^2$ Ch.	Sig.	Inappropriate Symptoms Males $\%R^2$ Ch.	Sig.	Females $\%R^2$ Ch.	Sig.
Objective physical characteristcs	16.4	.05	38.8	.001	18.9	.01	32.9	.005
Depressed mood	12.6	.001	3.3	NS	3.3	.05	1.1	NS
Somatic awareness	1.0	NS	8.1	.005	7.6	.001	15.8	.001
Disability	11.7	.001	7.9	.001	11.5	.001	9.0	.001
Social class and work type	0.0	NS	0.7	NS	0.4	NS	1.3	NS

$\%R^2$ = Percentage change in R^2 with addition of the item or class
Sig = Significance of proportional reduction in unexplained variance.

may lead to avoidance behaviors thus affecting the level of functional disability. Bearing the above consideration in mind, it is now proposed to examine one such structure in the explanation of magnified illness presentation, as represented by inappropriate responses to physical examination (signs) and report of inappropriate symptomatology (symptoms).

In Table 4, the prediction of each of the variables is presented separately for males and females. The order in which the independent variables were entered into the regression equations is as shown.

The effect of objective physical characteristics seems important in the genesis of both types if magnified illness presentation, and much more so in females than in males. Depressive symptoms are more important in the prediction of inappropriate signs, particularly for males. Heightened somatic awareness, on the other hand, is more important in the prediction of inappropriate symptoms especially for females. Disability is of comparable importance for both variables and sexes, while social class and physical demands of the job are of no importance once the other variables have been taken into account.

CONCLUSIONS AND IMPLICATIONS

An attempt has been made to evaluate the relative importance of physical and psychological dimensions in the understanding of functional disability, one index of severity of illness. An analysis of

the communication of pain and distress in chronic backache patients has permitted the differentiation of objective physical characteristics having psychological importance. Traditional measures of personality structure and even more specific hypochondriacal concerns appear of little value in the understanding of disability. Of particular importance is magnified illness presentation in the form of inappropriate responses to physical examination (signs) and reports of symptoms which are vague, ill-localized or lack the normal relationships to time, physical activity and anatomy. These are associated with the report of depressive symptoms or symptoms of heightened somatic awareness. In general medical practice it is assumed that the communication process is either quite irrelevant, or of minimal relevance, where some heed may be paid to "communication noise" but only in order that the physical signs and symptoms may be more clearly identified sharply and defined. With chronic pain patients the nature of the communication or language-game is of paramount importance, as failure to distinguish between objective physical characteristics and the types of psychological distress, outlined above, may lead to an over-estimation of the physical severity of the problem. If such an over-estimation leads in turn to ill-advised physical treatment, then the patient may be made worse.

Magnified illness presentation should not be taken as yet another attempt to explain treatment failure on the basis of personality structure or psychiatric disturbance. Such illness behavior would seem to be best understood as the natural result of failure to relieve not simply the experience of pain, but also its concomitants in the form of functional disability and patterns of escape or avoidance behavior. It is appropriate to be concerned about pain because the noxious nature of the pain sensation would appear to have biological value in impelling the organism to attempt to terminate the noxious stimulus thus reducing tissue damage. When appropriate concern, however, is accompanied by inappropriate pain descriptions (evident on the pain drawing or by the endorsement of symptoms having a poor anatomical or physiological basis), by inappropriate responses to physical examination (large number of inappropriate signs) or by depressive symptomatology or generalized heightened somatic awareness, then the clinician is confronted not with a patient suffering from a serious psychiatric illness or a premorbid disturbance in personality, but by a patient whose coping resources have not been sufficient to manage chronic pain.

Such a patient should be assessed for physical treatment which will reduce rather than increase functional disability: given guidance about the re-designing, where possible, of the work environment to minimize the likelihood of exacerbation of backache; educated about the nature of chronic pain in general and their individual problem in particular and assessed for suitability for psychological treatment aimed primarily at improving coping skills and minimizing the impact of the sequelae of backache on the patient's life.

Only where there is clear-cut pathology of such a kind that there is a reasonable chance of surgical success and little or no evidence of psychological distress, should surgery be considered as the main treatment. Surgery for clear-cut physical pathology accompanied by psychological distress should be undertaken only with concomitant multidisciplinary treatment of the kinds outlined. Surgery for psychological distress with no clear-cut physical pathology on no account should be contemplated. It has a considerable likelihood of making the patient worse.

It may be claimed that surgeons cannot be expected to be clinical psychologists. This is of course correct and as absurd as expecting clinical psychologists to function as surgeons. There is now sufficient evidence to suggest that at least a proportion of patients exhibiting psychological distress can easily be identified using screening techniques already referred to. For such patients assessment, treatment and management by a multidisciplinary team is essential, if the recognized hazards of repeated surgery are to be avoided.

It may well be that in other clinical conditions it will prove possible to distinguish illness behavior from pathology, although the particular sets of inappropriate signs and symptoms may well be disease specific (Gray et al, 1982).

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THE ROLE OF THE SPOUSE IN PAIN MANAGEMENT

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I have deliberately chosen a more general title than the scope of my clinical experience of pain patients would warrant, for what I have to say has much wider applications than merely to the management of low back pain which is my special interest. Where a disorder reaches its peak incidence and prevalence in the middle years of life - and this must apply to a large number of painful conditions - it is reasonable to expect that the typical patient will be either married or cohabiting. This not only provides an additional source of evidence for the assessor, but also a potential ally for the therapist.

Without skilled intervention the role of the spouse can be detrimental, as recently suggested by an neurosurgeon from another London teaching hospital (Connolly, 1982): "A great hazard to women is painful neurosis induced by a 'golden husband'. He listens assiduously to all her symptoms, carefully notes them remembers each day to enquire about them in detail and when she visits the doctor he fills in the minutiae which she has failed to relate. He cultivates neurosis, and any lady feeling that her husband sometimes tends to be a little neglectful and brusque should be grateful that he is not over-attentive and sympathetic, for when leucotomy for depression was much in vogue, many of the women patients proved to be suffering from 'golden husbands'."

During the past seven or eight years I have personally seen some 300 pain patients, of whom about 75% were married. Indeed, if we stop to consider the impact of chronic pain on any intimate relationship (and most of these patients were chronic by any sensible definition) then one can only marvel at the way in which most of these marriages had endured. But as Block et al. (1980) have inferred from their comparative study of pain patients with solicitous versus non-

solicitous spouses, there may be intelligible reasons for this state of affairs. In noting that the group with solicitous spouses had a significantly longer history of pain complaint (mean = 15.5 years) than the non-solicitous group (mean = 4.5 years), they offered two possible explanations for the difference. The first was that patients might be more likely to develop chronic problems when "pain behavior" was heavily reinforced by the spouse, as predicted by the operant model. The second possibility was that the quality of the spouse's response might undergo some form of natural selection during the course of chronic disability. "During the first few years of illness some spouses may respond to pain behavior with anger or frustration but, with increasing chronicity, many spouses may either adapt to the situation and respond to pain displays in a reinforcing manner, or leave the marriage" (p. 251).

Perhaps we can now begin to understand the significance of a "golden husband", although Connolly does not make clear whether - and if so why - golden husbands outnumber golden wives. In a series of fifty patients referred to the Wolfson Medical Rehabilitation center at Wimbledon (part of the St. George's group) women were found to predominate, contrary to the usual trend at this Center where men outnumber women by 3:2 (Humphrey and Jenkins, 1982). However, the literature is far from clear on this point, with authors displaying equal ingenuity in explaining how either men or women had come to dominate their series of pain patients as the case might be.

In what follows I shall be mildly handicapped by my inability to draw on research data. This invitation arrived three years too soon, and anyway I am by no means convinced that such findings as may emerge in due course will make it all that much easier for me to illuminate this area of human behavior and experience. Research, as we all know, has a habit of raising questions rather than providing clear cut answers, and I am almost relieved to have to withhold from you a confusing array of data which remain to be assembled. All I can offer you is a glimpse of some good intentions expressed in a research proposal on which the final verdict has yet to be delivered. Funding for one year has already been guaranteed, but the Back Pain Association has been slow to commit itself over the second and third years of a project that cannot possibly be accomplished in less than three years. The work is to be done in collaboration with my orthopaedic colleague Robin Bendall, and Mrs Eva Zarkowska of the Institute of Psychiatry has declared an interest in joining us if it can go ahead as planned.

Before outlining my research proposal I shall demonstrate my personal philosophy with two illustrative cases, the first of which is taken from the literature (Fordyce et al., 1968).

Mrs Y. is a 37 year old high school graduate with a "bright, upward mobile husband," working as a school administrator, and has a

teenage son. Since 1948, about a year after her marriage, she had suffered from virtually constant low back pain and had become gradually less capable of household duties. At the time of her admission to the comprehensive medical rehabilitation department of a teaching hospital, she was complaining of continuous backache which increased with any activity. She could not do anything for more than 20 minutes without a rest period, and according to her husband would spend all but about two hours of her normal day reading, watching TV or sleeping. Whenever the pain was exacerbated she would take medication and cry until it subsided, thereby eliciting much sympathy from both husband and son.

During the past 18 years she had undergone four surgical procedures. The first of these in 1951 was removal of a herniated disc, which abolished the symptoms of nerve root irritation without relieving her of all pain. The most recent was a spinal fusion in 1962, which was said to have eliminated all mechanical instability. There was no evidence of any neurological deficit.

In hospital a treatment schedule was devised to modify her pain behavior and enhance her general level of activity. Medication was given at specified intervals rather than when she complained of pain, and within six weeks of admission the narcotic content was reduced to vanishing point (unknown to either patient or nursing staff). All staff members were instructed to be as unresponsive as possible to her complaints of pain and discomfort whilst reacting positively to all signs of activity, especially when increased over the previous day. Thus "pain behavior received a minimum of social reinforcement while activity was maximally reinforced" (p. 105). In addition, an occupational therapy program was introduced with rest as the reinforcer. Mrs. Y. was also given a notebook for recording unscheduled activities to the nearest minute, and she was seen daily to construct graphs from her own records showing daily progress.

The results of this carefully planned campaign are illustrated in a graph (Figure 1). One could probably accept the authors' claim that judicious use of three potential reinforcers (medication, rest and social attention), commonly available in medical settings, can produce significant effects on behavior relating to chronic pain (p. 107). At the same time they explicitly state that the husband's wholehearted cooperation was crucial to the treatment plan as well as in maintaining subsequent progress. He was seen for at least an hour a week by the psychologist working with his wife, and was asked to monitor her weekend activities in accordance with the same therapeutic principles that were explained to him in detail. In this way she was enabled to extend her domestic and social activities in various ways. Despite this sensible precaution of involving the spouse (which not all treatment programs have encompassed, judging from published reports) the patient relapsed for a while on returning home. Yet she soon reverted to her new level of activity, and six

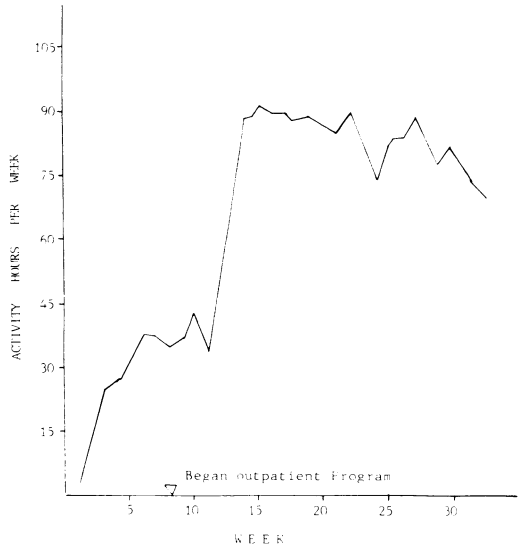

Figure 1.

months after discharge was being seen only once a month for a brief check on progress. Meanwhile the purchase of a second car had allowed her to start driving lessons with a view to promoting her independence and mobility in the local community.

So this, as far as it went, was a success story. Even if we assume that it was more than a transient response to therapeutic enthusiasm (hardly a safe assumption when one considers all the unscheduled life events that can readily precipitate a relapse) we must acknowledge that ventures of this nature call for a huge investment of professional time, and moreover are hard, if not impossible, to organize on an out-patient basis. We must also pay tribute to the husband, who despite the presumably crippling effects of his wife's disability during all but the first of their twenty years of marriage, had somehow preserved his devotion and goodwill towards her to remain available as a co-therapist. How often are such truly golden husbands to be found?

Let me turn to a married couple in my own series who, at first sight, might have been judged suitable for this kind of regimen if our rehabilitation center had been geared to it (and my own time is far too limited, hence the grant application). Again it was the wife who suffered from chronic back pain. The husband may have presented a golden facade, yet on closer acquaintance turned out to be distinctly alloyed. She also suffers from clinically recognizable depression, which had failed to respond well to psychiatric treatment at an earlier period. In contemplating any form of behavioral re-education in a controlled setting we must beware of facile optimism in regard to the spouse's contribution, and what we need at the

outset is time to explore the marriage relationship in the course of the first two or three interviews. Only then can we hope to weigh up the therapeutic challenge posed by some of these couples.

Mrs. G. was 35 when admitted to our rehabilitation center for the second time. Eight years earlier she had fallen on her own doorstep, and despite normal X-ray findings she soon became a chronic pain patient. Shortly after her discharge she had a combined laminectomy and spinal fusion from Mr Bendall, since when she has steadily gone from bad to worse. It has never been entirely clear to me whether she makes inordinate demands on her husband (who is ten years older and had suffered a life-threatening heart attack between our patient's first two admissions to the rehabilitation center) or whether it simply suits him to take charge of everything except the washing and ironing. However, he did point out at our first meeting that he was the dominant partner, and in a subsequent interview he surprised me with the unheralded announcement that he was the only man in his immediate working environment who was not having an affair, which his colleagues seemed to find more puzzling than he did. As he had experienced a previous marriage in which the trousers were not of his own wearing, one may speculate that power is more important to him than sex, especially as his wife's back pain did not allow frequent intercourse. And undiluted male power exercised from a position of strength is not calculated to promote a disabled wife's functional recovery.

I have visited the couple at home several times for both joint and separate conversations, and have also persuaded the wife to keep a pain diary for five consecutive weeks. This shows a good deal of avoidance behavior as expected, but the element of manipulation in the context of marital collusion has so far precluded an effective behavioral program. Not long ago the husband telephoned Mr Bendall's secretary to complain that my visits were doing his wife more harm than good (I had not actually seen her for at least two months at this stage, since Mr Bendall and I were seeing the couple at our joint clinic instead), and he therefore demanded her urgent admission for further surgery. It was explained to him that the indications for surgical intervention were tenuous, whereas the mutually destructive aspects of their relationship were still cause for concern (he himself has had to forgo promotion and lose substantial income owing to excessive time off in the supposed interest of his wife). The prognosis for this functionally crippled semi-invalid woman is scarcely favorable, with the two children fast growing up and little apparent prospect of her resuming even part-time work to get away from her domestic frustrations. Yet at least she has been spared the disruptive effects of further spinal surgery to add to all her existing problems.

In this case - and perhaps equally in the preceding one if we had more information about the marriage relationship - one might want

to argue that the patient's dependence and functional inadequacy had proved paradoxically rewarding for the partner. We seem to be confronted with an endlessly reverberating circuit that needs to be blocked at whatever cost; yet to intervene in such a collusive marriage can be a hazardous enterprise, since the couple's defences are rapidly mobilized when the equilibrium of their relationship is threatened.

I come finally to the essence of our research proposal, which has two major objectives: firstly, to compare medical and psychological models in the treatment of chronic pain patients, and secondly to explore the role of the spouse as a therapeutic ally. Until now there has been considerable wastage of resources from applying inappropriate methods in the management of chronic pain, so that a controlled comparison of alternative approaches seems overdue.

Patients at the rehabilitation center would be selected on the following criteria:

(i) pain complaint of at least 12 months duration
(ii) age under 60 (to exclude senile degenerative changes)
(iii) married, with spouse available and cooperative
(iv) evidence of possible "functional overlay" from history, clinical examination or psychological assessment (Figures 2 and 3).
(v) normal intelligence as judged from educational and occupational history.
(vi) no other current disorders of a physical or psychiatric nature.
(vii) realistic acceptance of a "treatment contract".

They will be alternately allocated to either a behavioral program or the Center's normal regimen, which is based largely on physical treatment and re-training in the activities of daily living. They will be followed up six months after discharge and their day to day level of functioning assessed, partly by means of a low back pain questionnaire developed by Mrs Zarkowska with 49 items distributed between the three categories of avoidance, help seeking and complaint.

The following predictions are to be tested: (i) that patients exhibiting "pain behavior" to a marked degree would obtain better outcome ratings when treated behaviorally than by an orthodox medical regimen and (ii) that patients showing evidence of marital collusion or "undesirable mutuality" - as inferred from close concordance between patient's and spouse's responses to a short pain questionnaire devised by Swanson and Maruta (1980) at the Mayo Clinic - would fare less well by either method. The Mayo Clinic work would appear to be well worth trying to replicate since the method is simple enough, even if the questionnaire stands in need of elaboration and refinement. (The version supplied by the senior author in 1981

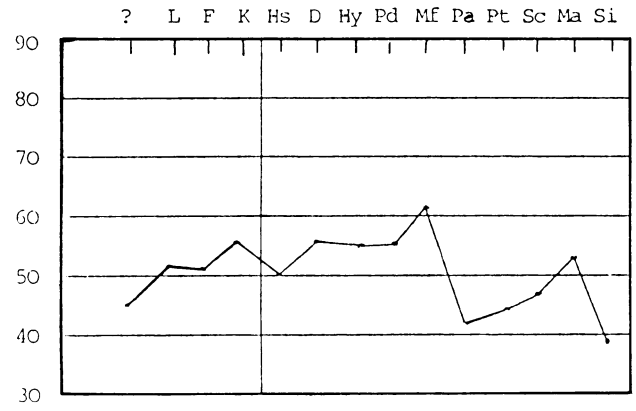

Figure 2

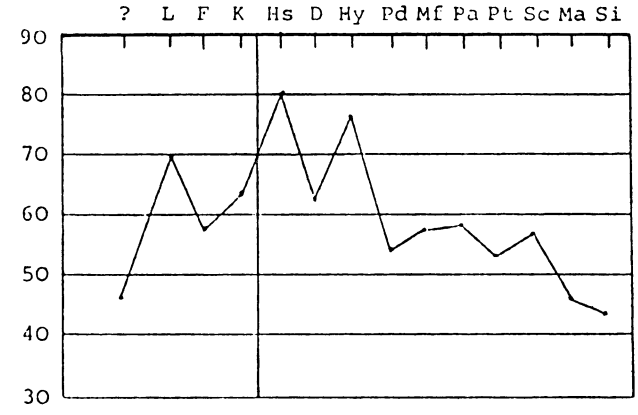

Figure 3

encompassed the nature and severity of the pain, its effect on sleep, mood, work, recreation and sexual life, factors which aggravated or relieved it, etc.) At the same time patterns of marriage will need to be explored, both by methods of self-report (e.g. Locke and Wallace, 1959; Ryle, 1966) and also, if possible, by observing how the couple behave in a stress situation under experimental control. It might even be feasible to apply a typology of marital relationships such as that of Cuber and Haroff (1965). The spouse's attitude to the pain complaint, both in the past and during the current rehabilitation period, will be documented in detail and carefully monitored for as long as possible.

What I have been outlining is a difficult field of enquiry, and progress is bound to be slow. Yet one has to start somewhere, and I hope at least to have aroused your interest with my optimistic glimpse of things to come.

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THEORIES OF CHRONIC PAIN PHENOMENA

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INTRODUCTION

Acute pain is a normal, adaptive response of the organism which signals bodily injury or disease. As such it is to be welcomed, particularly when it serves to prevent further injury or ensures rapid and effective medical treatment. However, when pain persists beyond the usual course of a disease or the normal healing time for an injury, or when it is associated with progressive diseases such as malignant cancers and arthritis, pain may be termed chronic.

Chronic pain (usually defined as severe persistent pain of more than six months duration) differs from acute pain in several important respects. First, as has been pointed out by Sternbach (1976), the physiological response to pain is different. Acute pain elicits an increased level of activity in the sympathetic branch of the autonomic nervous system (increase in cardiac rate, respiration, etc.). By contrast, in chronic pain there is habituation of the autonomic responses: a pattern of vegetative signs emerges instead, including disturbances of appetite and sleep, decreased libido, irritability, withdrawal of interests, etc. In consequence, while the affect most commonly associated with acute pain is anxiety, that most commonly associated with chronic pain is depression.

The second major difference between acute and chronic pain concerns its impact on the individual personally, socially, occupationally, etc. Pain of recent onset and of relatively short duration (acute pain) requires rapid, but relatively minimal, changes and adjustment. By contrast, chronic pain has major behavioral consequences for the individual in virtually every aspect of their life. There can be no doubt but that chronic pain changes people and

as such it introduces a social and psychological perspective which goes far beyond that involved in acute pain.

CHRONIC PAIN PHENOMENA

Leaving aside patients with progressive and degenerative diseases, a significant proportion of the remaining population of chronic pain patients manifests a common set of behavioral patterns, a factor which has led pain investigators such as Chapman (1977) to use the term 'chronic pain syndrome'. These behavioral patterns include the following characteristics:

(i) With increasing passage of time, pain complaints and behavior tend to become less consistent with organic pathology. This phenomenon of desynchrony between the sensory and emotional components of pain can be produced under certain conditions in acute pain, for example, under hypnotic analgesia. However, with many chronic pain patients, 'desynchrony' seems to be the norm rather than the exception.

(ii) Chronic pain patients often report very high levels of persistent pain maintained over long time periods. For example, in a study by Swanson and Maruta (1980), the investigators asked a group of 200 pain patients admitted to an inpatient pain management program to rate their pain hourly, while awake, on a scale of 0 (no pain) to 10 the most severe pain imaginable). Their estimates were averaged for days 3 through 5 of their hospital stay. Thirty-five patients were assigned to a high pain group on the basis of an average rating of 8 - 10. Thus, from their self-reports, these patients must have been experiencing virtually constant pain, of maximal severity, all day and every day.

(iii) Severe pain reports tend to persist unabated despite medical intervention and the passage of time.

(iv) Many chronic pain patients tend to use analgesic medications excessively and inappropriately. However, they usually report very little benefit from its use in terms of pain relief.

(v) Similarly, many chronic pain patients repeatedly seek and receive active and invasive medical treatments of a surgical nature. A not unusual response is one of immediate improvement followed by deterioration to a worse state than that obtaining pre-operatively. Chronic pain patients often end up with multiple operations and severe, persistent pain.

(vi) Finally, chronic pain patients often exhibit withdrawal from virtually all occupational, social and family responsibility. a consequence which has led many investigators to apply the term 'invalid status' to the patient's behavior.

In many cases, the presence of chronic pain can be adequately explained in terms of nature and severity of the underlying organic pathology: for example, where there is a progressive, degenerative disease. In others, however, this is not the case and the above list of characteristics of the chronic pain syndrome is commonly in evidence. In the literature a dichotomous distinction is often made between 'organic pain', on the one hand, and 'functional or psychogenic pain', on the other. Alternative terms which have been used to refer to the latter are the 'dissatisfied pain patient' and, in the case of back pain patients, the 'back pain loser'. For obvious reasons, psychological theory and practice has tended to concentrate on the latter subgroup of chronic pain patients: namely those who exhibit pain behaviors which are apparently out of all proportion to the nature and extent of the current organic pathology.

THEORIES OF CHRONIC PAIN

Attempts to explain the behavior of chronic pain patients have come from a wide variety of perspectives. The review that follows should be seen as illustrative of such varying perspectives rather than any attempt at providing a comprehensive coverage of theories in the area.

Dynamic Theories

Dynamically orientated theorist have tended to view the experience/behavior of chronic pain patients as motivated by the desire either to escape from a aversive situation or to obtain positive gratification, goals which are not easily provided except by the 'invalid status' consequent upon pain. Explicitly stated examples of such theorizing are 'Legitimization Motivation' theory (Meyers and Lyon, 1979) and 'Dependency Motivation' theory (Gentry et al., 1974).

1. Legitimization Motivation Theory

The 'legitimization motivation' theory proposed by Meyer and Lyon is outlined in Figure 1. They suggest that, when an individual with personality problems is confronted with stressful life events, such an individual may be socially and psychologically disabled (i.e. unable to cope). Moreover, such an individual may not be able to accept the reasons for their inability to cope) i.e. the disability is unacceptable to themselves, in such terms). However, if they have an accident or become ill, and especially if they are in pain, their inability to cope socially and psychologically may be legitimized in the sense that it becomes acceptable socially and personally. Thus, according to this theory, some individuals who have difficulty in

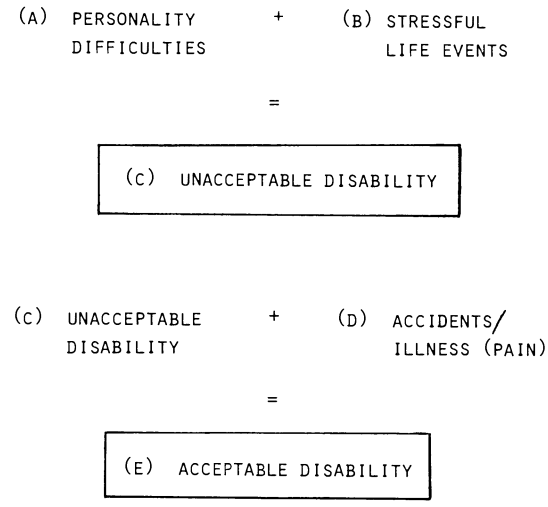

Fig. 1

coping with life may derive personally acceptable benefit from apparent physical ill-health. Meyer and Lyon (1970), in a longitudinal study of accident victims, found some support for this model in the form of an increased incidence of stressful life events preceding the accident and reduced reported incidence following the accident. Thus, life for these victims did appear to have become less stressful as a consequence of their accident and resulting disability.

2. Dependency Motivation Theory

The 'dependency motivation' theory proposed by Gentry et al., is outlined in Figure 2. They suggest that chronic or dependent pain behavior may arise through a combination of three factors. First, what they term unmet dependency needs. They argue that such needs may be present in individuals who are later-born children from large families; who leave school and start work early; who marry early; and who start a family of their own early. These individuals, they suggest, may have suffered relative deprivation of their own requirements for tender loving care and protection during childhood and adolescence. The second factor is the availability of such support from family members at the time of their accident/pain. And the third factor is the presence of early parental/family models for pain/disability behavior. Gentry et al. (1974) provided evidence from a study of 56 chronic low-back pain patients which was consistent with the theory as stated. However as far as the writer is aware, no other explicit attempt has been made to test the validity and generalizability of these notions to date.

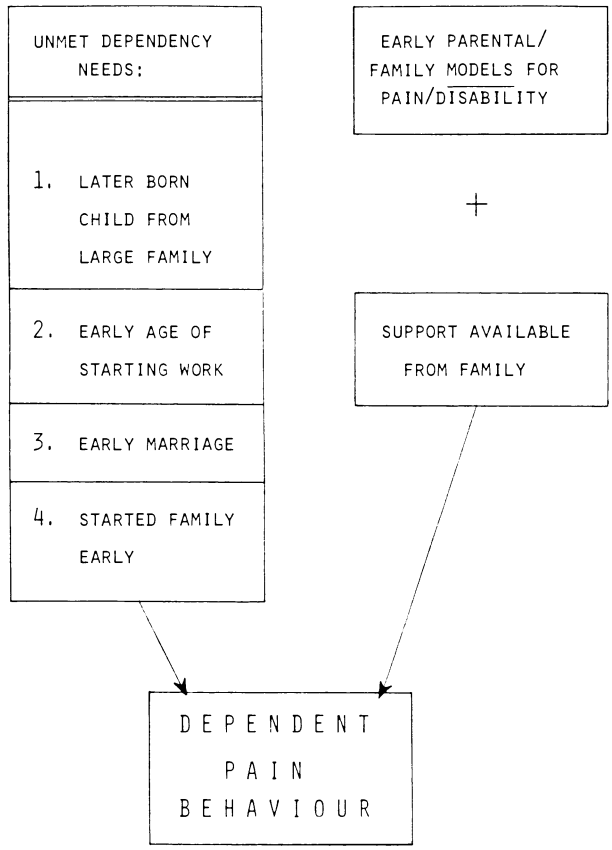

Fig. 2

Personality Theories

Given some of the features of chronic pain phenomena as outlined previously, it is hardly surprising that investigators have looked to personality profiles in an attempt to explain such behavior. In fact, the basic notion that chronic pain experience and chronic pain behavior have more to do with personality than with noxious stimulation has been the cornerstone of psychological research in this area for the last thirty years. Almost all of this work has been empirical in nature and has utilized standard psychometric test. Three aspects of this research endeavor will be considered here: the MMPI; the EPI; and Illness Behavior.

1. Minnesota Multiphasic Personal Inventory (MMPI)

The MMPI is a self-report personality inventory which contains 550 items and takes between one to two hours for an individual to complete. The current version provides measures of ten clinical scales and three validating scales and has been, by far, the most widely used psychological test in the area of pain research. Whatever its merits and demerits, the MMPI has generated a lot of research data and theorizing on the subject of pain and, in consequence, demands careful scrutiny and evaluation. So far, the writer has found over fifty papers on the subject on the MMPI and pain. These papers can be broadly classified into one or more of five categories, as follows: (i) general profiles of pain patients, (ii) diagnostic studies, (iii) predictive studies, (iv) profiles of pain 'subgroups' and (v) review articles. Studies in each of the first four categories will now be reviewed.

General MMPI profiles of pain patients. Table 1 summarizes the finding from twelve studies which have looked at general MMPI profiles of various groups of chronic pain patients including low back pain patients, rheumatoid arthritis patients, disability insurance claimants, etc. A number of these studies have tested fairly sizeable patient samples (e.g. Polley et al., 1967; Shaffer et al., 1972). The main findings to emerge are: (a) that pain patients tend to score higher on all the neurotic triad scales of the MMPI, namely, hypochondriasis (Hs.), depression (D), and hysteria (Hy.); or (b) that such patients tend to exhibit the 'Conversion V' pattern on these scales, that is, elevations on hypochondriasis (Hs.) and hysteria (Hy.) with relatively depressed scores on depression (D).

MMPI diagnostic studies. Attempts to discriminate diagnostically between 'organic' and 'functional/psychogenic' low-back-pain patient began with Hanvik (1951). He tested thirty patients from each diagnostic group and found that the functional patients scored significantly higher on the neurotic triad and also exhibited the conversion 'V' pattern. He also derived a special scale for identifying functional pain patients using selected MMPI items, known as the Lb scale (Hanvik 1951). Twenty years later another specialized scale was developed for the same purpose using selected MMPI items, known as the DOR (Pichot et al., 1972).

In general, investigators have confirmed the findings of Hanvik (1951) with two provisos. First, differentiation between organic and functional groups is not sufficiently sharp to justify the use of the MMPI as a diagnostic instrument on its own. And, secondly, the specially derived low-back-pain scales (Lb and DOR) have also been found wanting diagnostically. The diagnostic studies are summarized in Table 2.

Table 1. Pain, Disability and the MMPI. General Profiles

Study	Samples	Findings
1. Phillips (1965)	58 Low back patients 72 Fracture case controls	on Hs, D, Hy LBP > fractures > controls
2. Pilling et al. (1967)	182 Medical and surgical patients with pain 380 Patients without pain	Male pain patients scored higher on Hs than male non-pain patients
3. Polley et al. (1970)	726 Rheumatoid arthritis 50,000 General medical 1,576 Normal healthy	RA scored higher on Hs, D, Hy
4. Beals and Hickman (1972)	110 Back injuries 70 Extremity injuries 40 Controls	On Hs, D, Hy back injuries > extremity > controls
5. Shaffer et al. (1972)	1,064 Disability claimants 14,306 General medical	For both males and females, disability claimants scored higher on Hs, D, Hy
6. Sternbach et al. (1973)	68 Low back pain (41 m, 27 f)	Elevations on Hs, D, Hy > 70: no conversion 'V'
7. Sternbach et al. (1973)	117 Low back pain (57 m, 60 f)	Elevations on Hs and Hy > 70: conversion 'V'
8. Maruta et al. (1976)	26 Low back pain 24 Depressed patients 50,000 General medicine	Male LBP patients scored higher on Hs: no conversion 'V'. Female LPB patients show conversion 'V'
9. Maruta et al. (1976)	31 Psychiatric patients with low back pain	Elevations > 70 on Hs, D, Hy
10. Fordyce (1978)	100 Chronic pain patients (28 m, 71 f)	Elevations > 70 on Hs and Hy
11. Swanson et al. (1978)	11 Dissatisfied LBP 19 Satisfied 25,723 Mayo clinic patients	Dissatisfied patients scored higher on Hs, D, Hy: mean scores > 70
12. Swanson et al. (1980)	31 Low pain 35 Extreme pain	No significant differences on MMPI clinical scales

Table 2. Pain, Disability and the MMPI. Diagnostic Studies

Study	Samples	Findings
1. Hanvik (1951)	30 Organic LBP 30 Functional LBP	a) Functional patients scored signif. higher on Hs, D, Hy: b) Conversion 'V' c) Derived Lb scale
2. Carr et al. (1966)	20 "Real" pain 20 Psychogenic	Psychogenic patients higher on Hs, D, Hy conversion 'V' present for both groups
3. Schwartz and Krupp (1971)	29 Organic patients 45 Mixed patients 45 Functional patients	Conversion 'V' not found to be diagnostic
4. Pichot et al. (1972)	Organic LBP Functional LBP	Found new scale DOR more effective than Lb scale
5. Calsyn et al. (1976)	31 Organic LBP 31 Mixed LBP	Mixed group higher on Hs, D, Hy (all above 70); Lb and DOR correctly classified 75% of patients
6. Freeman et al. (1976)	12 Organic LBP 12 Mixed LBP 12 Functional LBP	Functionals and mixeds scored signif. higher (> 70) on Hs, D, Hy
7. McCreary et al. (1977)	42 Organic LBP 37 Functional LBP	Functionals scored signif. higher (< .05) on Hs, Hy but not D
8. Louks et al. (1978)	31 Organic LBP 31 Mixed LBP 12 Functional LBP	Functionals and mixeds scored signif. higher on Lb and DOR scales
9. Towne and Tsushima (1978)	20 Functional LBP 20 Gastrointestinal pain (functional) 20 Psychoneurotic	Neither Lb nor DOR scales nor both could discriminate successfully
10. Tsushima and Towne (1979)	20 Organic LBP 20 Functional	Lb scale did not discriminate
11. Leavitt and Garron (1980)	79 Organic LBP 41 Functional LBP	Functionals scored signif. higher (< .01) on Hs, D, Hy

A likely explanation for the diagnostic failure of the MMPI has been highlighted in the study of Rosen et al. (1980). They looked at a group of 123 consecutive LBP patients and independently rated them on two separate axes:

(i) high versus low on (organicity',

(ii) appropriate versus inappropriate 'disability' (pain behaviors)

Using the MMPI, they found that high scores on the Hypochondriasis or Hysteria scales provided a much better prediction of disability than of organicity. It seems obvious now, but in many earlier studies the implicit assumption seemed to be that organicity and functional disability are mutually exclusive. What the Rosen et al., study shows is that a psychological test (the MMPI) is not very good at diagnosing physical pathology, or rather its absence. It is much better at diagnosing psychological disability (pain behavior). The important point, of course, is that organic and functional involvements are not mutually exclusive, rather the two can and do vary independently. Thus, you can have physical pathology of the lumbar-dorsal spine, with or without psychological disability (pain behavior) and possibly vice versa. In fact, most of us probably do not have either physical or psychological pain disability, we are either 'organic' nor 'functional'.

MMPI predictive studies. Following on from the last section, the Rosen et al. (1980) study shows that the MMPI neurotic triad correlates fairly well with inappropriate pain disability (pain behaviors) and given that the severity of pain behaviors, is the major criterion for assessing treatment outcome, it is not surprising that the MMPI fares better in predictive than diagnostic studies. The findings from eleven such studies are presented in Table 3.

It can be seen that, with the exception of the Keefe et al. (1981) report, all studies have produced positive findings using a variety of methodological and statistical procedures (i.e. multiple regression analysis, hit rates, chi-square, outcome group comparisons). A particularly interesting finding emerged from the study of McCreary et al. (1979). They looked at the usual MMPI scales as predictors of response to conservative treatment in a sample of 76 chronic LBP patients. Three outcome ratings were obtained at a six to twelve month follow-up: (a) self-rating of amount of pain relief, (b) self-rating of ability to return to normal activities, and (c) self-rating of level of pain intensity during the previous week. MMPI scales and code types were significantly associated with the second and third outcome measures but not the first. This lends support to the earlier observation that he MMPI variables are best at predicting pain behaviors rather than anything else.

Table 3. Pain, Disability and the MMPI. Predictive Studies

Study	Samples and Measures	Outcome Relationships
1. Dahlstrom (1954)	26 Low back patients	a) Multiple predictor (incl. MMPI scales) r = + .83) b) Lb scale r = - .20)
2. Wilfling et al. (1973)	26 LBP patients (7 poor: 12 fair: and 7 good outcome following surgery)	Good outcome group scored signif. lower on neurotic triad: but no difference on Lb scale
3. Wiltse and Rocchio (1975)	130 LBP patients 1 year follow-up of operative success	Multiple r using Hs and Hy scales = 0.60
4. Blumetti et al. (1976)	42 LBP patients response to surgery	76% hit rate using elevations on Hs and Hy
5. Cashion and Lynch (1979)	70 LBP patients response to surgery 46 Good responders 24 Bad responders	85% hit rate using elevations on Hs and Hy
6. McCreary et al. (1979)	76 LBP patients a) Pain relief 30 successful 31 unsuccessful b) Return to activities 26 Successful 31 Unsuccessful c) Pain intensity 31 Low 34 High	a) No signif. diffs. on neurotic triad: no relationship with code types b) Signif. diff. on Hs: signif. relationship with code types c) Signif. diffs. on Hs: and D: signif. relationships with code types
7. Pheasant et al. (1979)	103 LBP patients response to surgery 49 Good responders 21 Fair responders 20 Poor responders	Signif. associations between both Hs and Hy and outcome ratings
8. McCreary et al. (1980)	102 LBP patients	Signif. association between outcome and 'somatic concern' factor (incl. Hs, D, Hy)
9. Keefe et al. (1981)	111 LBP patients 28 Best responders 28 Worst responders	No signif. diffs. between outcome groups on MMPI scales
10. Long, C.J. (1981)	44 LBP patients 22 Successes 22 Failures	Signif. diff. on Hs scale only: associations between code profiles and outcome
11. Strassberg et al. (1981)	112 Chronic pain patients	Pretreatment MMPI scores were found to predict outcome 20 months later

MMPI profiles of pain 'subgroups'. The latter three sections have been concerned with the general MMPI profiles of chronic pain groups and the general diagnostic and predictive value of MMPI variables. A rather different approach has been to use the MMPI scales of form 'personality' subgroups of chronic pain patients and then to study the prognostic value of such subgroupings.

The exploratory value of such a subgrouping approach was first made explicit by Sternbach (1974) in his book entitled Pain Patients: Traits and Treatments. Sternbach identified four subgroups, each with apparently different prognoses, as follows: (a) Hypochondriasis (Hs., D., Hy >70: Hs. highest - this subgroup pattern he found to have a poor outcome indicative of treatment failures; (b) Reactive Depression (Hs., D., Hy >70: D highest) - this subgroup pattern he found to be more common in somatogenic patients and to carry a favorable prognosis if such patients were treated with antidepressant medication; (c) Somatization Reaction (Hs., Hy >70:D<70) - this conversion 'V' subgroup, Sternbach considered, used denial mechanisms to deal with latent depression and to have moderate prognosis; (d) Manipulative Reaction (Hs., D., Hy., and Pd. >70) - this subgroup was the smallest in his study and was considered particularly difficult to manage.

More recently Bradley et al. (1978) and Prokop et al. (1980) have attempted to identify MMPI subgroupings of both LBP patients and also multiple pain patients, which could be used as a basis for long-term follow-up studies. The results to date are presented in Table 4, separated out by sex and site of pain.

It can be seen from Table 4 that subgroup defined by elevated scores on all three neurotic triad scales (i.e. AF and AM) account for between 23% to 28% of female pain patients and for between 37% to 44% of male pain patients; that subgroup defined by elevated scores on most of the ten clinical scales (i.e. DF and DM) account for relatively few pain patients of either sex; and that while the conversion 'V' pattern (i.e. CF) was exhibited by 24% to 32% of females, it was apparently absent in males. However, perhaps the most interesting finding subgroups defined on the basis of normal scores on the MMPI (i.e. BF and BM). These account for 40% of female pain patients and from 37% to 46% of male pain patients.

Thus, more than a third of chronic pain patients, of both sexes and irrespective of the site of pain, obtain MMPI scale scores within the normal range. It will be interesting to see how such patients do at long-term follow-up.

Conclusions on MMPI studies. Adams et al. (1981) reviewed 17 major MMPI studies on chronic low back pain and came to the following conclusions: "First, it seems clear that no single feature or scale of the MMPI is likely consistently to differentiate functional and

Table 4. Pain, Disability and the MMPI. MMPI Subgroups

A. Females MMPI Subgroup	*LBP Patients 1973-75 : n = 315	**Multiple Pain Patients 1974-75 : n = 156
AF. (Hs, D, Hy > 70)	74 (23%)	44 (28%)
BF. (All normal i.e. < 70)	124 (40%)	62 (40%)
CF. (Hs, Hy > 70) D < 70 i.e. conv. "V"	77 (24%)	50 (32%)
DF. (Most scales > 70)	40 (13%)	-

B. Males MMPI Subgroup	*LBP Patients 1973-75 : n = 233	**Multiple Pain Patients 1974-75 : n = 81
AM. (Hs, D, Hy > 70)	102 (44%)	30 (37%)
BM. (All normal i.e. < 70)	108 (46%)	30 (37%)
CM. (D > 70)	-	16 (20%)
DM. (Most scales > 70)	23 (10%)	5 (6%)

*Taken from Bradley et al. (1978)
**Taken from Prokop et al. (1980)

organic back pain"; "Second, studies show that the patient with chronic back pain has some degree of elevation on the Hs, D, and Hy scales"; "Most importantly, most recent studies suggest that the group differences found in organic versus functional studies do not translate to the individual case" (Adams et al., 1981).

On the basis of the current, more extensive review, the following conclusions might be added: "Fourth, high scores on selected MMPI scales (e.g. the neurotic triad) are more closely related to psychological pain disability, independent of organic involvement, than they are to the (? inappropriate) distinction between organic and functional pain; "Fifth, there is no point in conducting further empirical investigations using the MMPI until it is possible to relate current findings to a more general psychological theory of chronic pain".

One such attempt by the writer and his colleagues will be outlined later (Letham et al., 1983).

2. Eysenck Personality Theory (EPI).

By contrast with the MMPI, the EPI has been used fairly infrequently in investigations of chronic pain. A notable exception to this rule has been provided by the work of Bond (1971; 1973; 1976) who established an innovative methodology for separating out the psychological manifestations of pain, namely, 'pain experience' and 'pain behavior'. Bond (1971) administered the EPI to three groups of female patients suffering with advanced carcinoma of the cervix. The first group (n = 13) comprised patients who were apparently without pain and did not receive analgesics (i.e. pain experience - : pain behavior -). The second group (n = 17) comprised patients who had pain but did not receive analgesics (i.e. pain experience + : pain behavior -). The third group (n = 22) comprised patients who had pain and also received analgesics (i.e. pain experience + : pain behavior +).

The major findings were that:

(1) patients who reported pain (group 2 and 3) scored significantly higher on the neuroticism scale of the EPI than the group who reported no pain (group 1), and

(2) patients who both reported pain and requested analgesics (group 3) scored significantly higher on the extraversion scale of the EPI than the group who reported pain but did not request analgesics (group 2).

Thus, pain experience appears to be related to neuroticism or emotionability, whereas pain communication (pain-complaining behavior) seems to be related to extraversion.

In a subsequent study, Bond (1973) found an increased spread of neuroticism scores in a sample of thirty patients with severe carcinoma pain, and a reduction of the range toward more normal values in those patients who experienced total pain relief following successful surgery. It appears that in response to the stress of physical illness, some individuals respond with increased emotionally whilst others respond with decreased emotionality and that successful pain relief serves to normalize these response styles.

3. Illness Behavior

The concept of 'illness behavior' was introduced by Mechanic (1962) in the following words:

"By this term we refer to the ways in which given symptoms may be differentially perceived, evaluated, and acted (or nor acted) upon by different kinds of persons. Whether by reason of earlier experiences with illness, differential training in respect to symptoms, or

whatever, some persons will make light of symptoms, shrug them off, and avoid seeking medical care; others will respond to the slightest twinges of pain or discomfort be quickly seeking such medical care as is available."

Thus, illness behavior is conceptualized as reflecting individual differences in response to symptoms of disease. As such, the concept has been operationalized by Pilowski and his colleagues and is enshrined in a 52-item questionnaire known as the Illness Behavior Questionnaire (IBQ). The IBQ was developed and validated by Pilowski and Spence (1975) on a sample of 100 intractable pain patients (48 male, 52 female). Their mean duration of pain was 7.4 years, only 20% had major organic pathology, and only 27% suffered marked impairment due to pain. The questionnaire responses obtained from this sample were submitted to a varimax-rotation factor-analysis, from which seven meaningful factors were extracted. The amount of variance accounted for by each factor is shown in brackets. The factors were interpreted as follows:

1.	general hypochondriasis	(24.8%)
2.	disease conviction	(10.0%)
3.	somatic V psychological perception of illness	(7.6%)
4.	affective inhibition	(6.8%)
5.	affective disturbance	(6.5%)
6.	denial of problems	(4.3%)
7.	irritability	(3.3%)

In a follow-up study, Pilowski and Spence (1976) compared the scores of the original sample of 100 intractable pain patients on the seven IBQ scales with a sample of 40 general medical patients who had pain as a prominent symptom. The two groups differed significantly only with respect to factor 2 (disease conviction). The authors therefore suggest that 'abnormal illness behavior' (AIB) may be viewed as: (a) conviction as to the presence of disease, (b) somatic preoccupation, and (c) inability to accept reassurance from a doctor.

Since the Pilowski and Spence studies, several investigations have reported results which essentially confirm the factor structure of the IBQ (Large and Mullins, 1981; Demjen and Bakal, 1981), its value in group comparisons (Speculand et al., and the independence of factor scores from actual physical pathology (Wise and Rosenthal, 1982).

Learning Theories

Arguably, one of the most influential contributors to the field of chronic pain over the last decade or so has been Wilbert Fordyce. An experimental psychologist, Fordyce has sought to analyze the behavior of pain patients in terms of learning theory principles and

to generate appropriate pain management programs from such as analysis. His basic analysis is summarized in Figure 3 where it can be seen that he distinguishes between respondent pain, which is physiologically-driven, and operant pain, which is environmentally-maintained. In the case of respondent pain, pain behaviors are viewed as a natural and appropriate consequence of nociceptive stimulation but, once established, are viewed as suitable operants for subsequent reinforcement, both positive and negative.

Fordyce has made an invaluable contribution by drawing attention to the obvious reinforcers, both positive and negative, consequent on pain behavior, and through his development of a standard type of in-patient multidisciplinary management program for pain patients (Fordyce, 1973). This kind of program has become the blueprint for pain-management-programs throughout the whole of North America and is now beginning to have a similar impact in Europe, and especially in the United Kingdom.

However, notwithstanding his enormous theoretical and practical contributions to the area, there are at least two possible problems

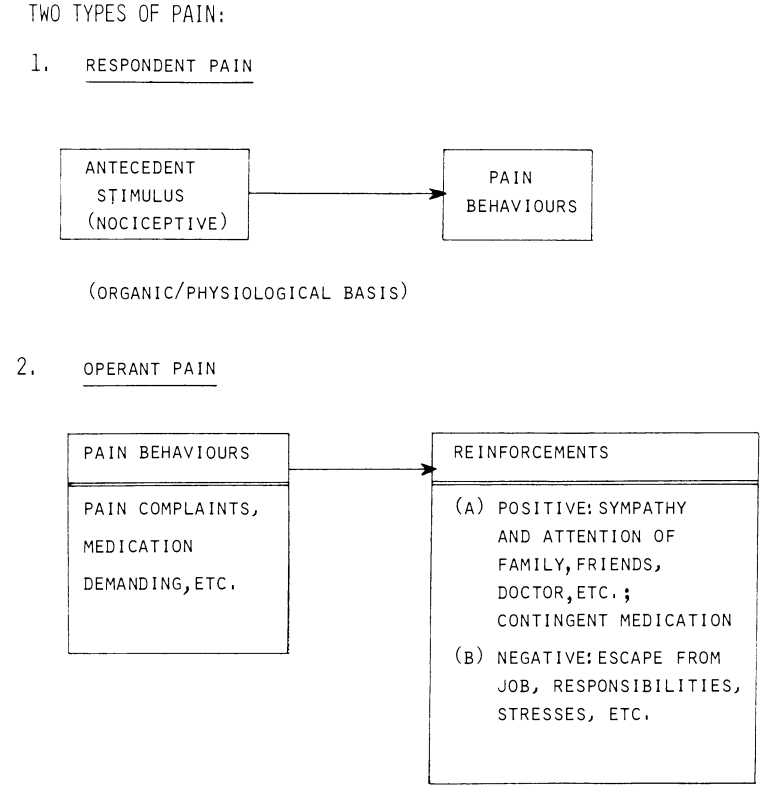

Fig. 3

with Fordyce's basic analysis. First is the possibility that psychologists will become obsessed with attempting to distinguish between 'respondent' and 'operant' pain patients in the same way that they have attempted to distinguish between 'organic and 'functional' pain patients in the past, and second, is fordyce's insistence on limiting the analysis to pain behavior, thereby rejecting the currently perceived importance of cognitive processes. While Fordyce must, without doubt, be seen as the founder of psychological pain management, it is clear that further theory and practice are both desirable and necessary.

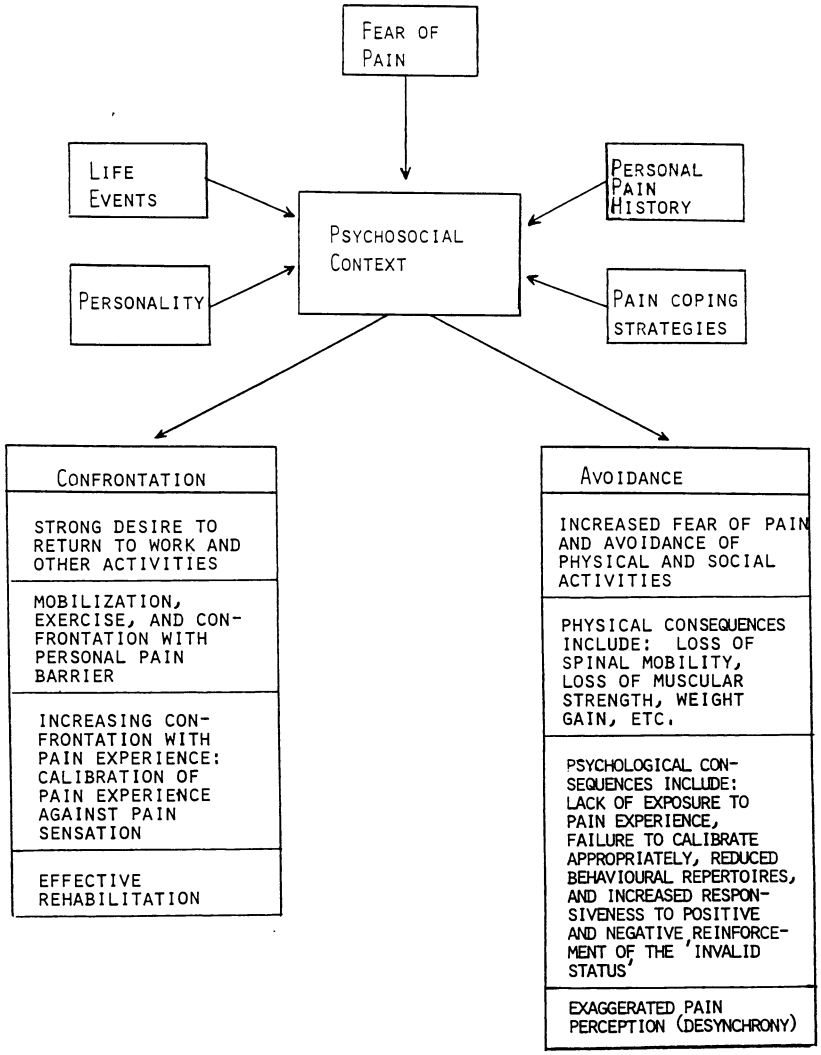

Fig. 4

Over the last few years a number of practical and theoretical observations have been made which necessitate the further development of theorizing in the area. Phillips has carried out a series of studies exploring the nature of, and possible treatment for, tension headache (Phillips, 1977a,d; 1980; Phillips and Hunter, 1981). In these studies she has failed to discover a relationship between muscle-tension level and headache severity levels, and has gone on to develop separate scales for pain complaints and pain avoidance behavior in headache sufferers (Phillips and Hunter, 1981).

Following on from Phillips, the writer and his associates have developed a fear-avoidance model of exaggerated pain perception (Lethem et al., 1983; Slade et al., 1983) which attempts to account for individual differences in pain experience and pain behavior in terms of a continuum of confrontation/avoidance strategies (see Figure 4). Central to the model is the concept of 'fear of pain' which, it is argued, leads to differing responses in different individuals - from extreme 'confrontation ' to extreme 'avoidance'. The response of the individual, it is suggested, depends on the specific psychosocial context which in turn is influenced by a number of factors: (1) the presence/absence of stressful life events, (2) personal pain history, (3) personal coping strategies, and (4) characteristic behavior patterns (personality). The model takes in to account not only Fordyce's learning theory analysis but also some of the observations previously described under the rubric of dynamic and personality theories.

Behavioral/Biochemical Interactions

The basic pain management program advocated by Fordyce (1973), and successfully implemented by himself and others, places a heavy emphasis on physical and social activity. Thus, in line with the Lethem et al. (1983) model, increased activity seems to be therapeutic for many chronic pain patients. This effect of increased

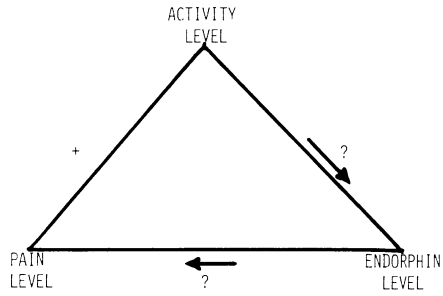

Fig. 5

activity may be accounted for in purely psychological terms or, alternatively, it might have a physiological basis. One possibility, for example, is that an optimum level of physical activity may stimulate the production of appropriate endorphins/encephalins which, in turn, may serve to reduce central pain fiber activity (Slade and Troup, 1983). Such an hypothetical mechanism is illustrated in Figure 5.

SUMMARY

In this paper I have attempted to describe the basic phenomena of chronic pain and to outline the major theories which have been proposed to account for them. Inevitably such a review is likely to be selective.

The major theoretical areas which have been covered, albeit selectively, are those pertaining to dynamic concepts, personality theories, and learning-theory approaches. However, at face value, none of these appear to be directly incompatible with each other and the task remains of producing a comprehensive account of chronic pain.

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PSYCHOLOGICAL TREATMENTS FOR CHRONIC PAIN

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There is no real dispute in the literature on the importance of psychological variables in the experience of pain and pain reporting. Since the development of Gate Control Theory the extent of tissue damage is seen as less relevant in the experience of chronic pain, than specificity theory previously suggested. Increasingly, central effects are being considered in treating both the sensation of pain and pain-related behaviors. Methods of psychological treatment for chronic pain are developing rapidly in response both to new psychological studies, and a general disillusionment with existing methods. But this development of psychological methods is not confined to those patients suspected as having a large psychogenic component to their pain. We are not simply dealing here with psychological disturbance: the methods described are equally applicable to patients complaining of chronic pain, irrespective of the extent of psychological component involved.

The generally agreed distinction between cognitive/emotional, behavioral/operant and physiological response systems relating to chronic pain, gives us a framework within which to systematise the discussion of treatment approaches to chronic pain, though these approaches are clearly not mutually exclusive and their interactive effects can easily be recognized.

This chapter will cover those specific treatments relating to these three aspects of pain, followed by a summary of outcome studies which make an attempt to predict those personal and demographic variables relating to treatment outcome. The results are mainly contradictory, though methodological difficulties make them hard to evaluate.

COGNITIVE AND EMOTIONAL FACTORS

It is impossible to approach the problems of chronic pain without considering that for many reasons certain individuals report more pain than others, even when they have comparable tissue damage. Though it has been suggested this may be related more to personal factors such as personality or mood, the causal or correlational nature of this relationship is actively under discussion.

Peter Slade and Chris Main's contributions to this chapter will have covered aspects of MMPI measurement and chronic pain patients. It is simply important to note here that those subjects with raised hysteria, depression and hypochondriasis scores are most commonly found amongst chronic pain populations, particularly those with functional diagnosis. This pattern is noted but less marked in other chronic medical populations (Swanson et al., 1976). Roberts and Reinhardt (1980) describe the relationship with responsiveness to treatment, Hendler (1980) discusses the issue of cause or effect with these patients and McCreary et al. (1980), using a principle components analysis of MMPI and a battery of other psychometric tests with low back pain patients, found a major component of "somatisation". Hendler (1979) has discussed the issue of predicting outcome to treatment on psychological tests, and he has devised a screening test for patients with low back pain which, though having some internal structural problems, can identify 83% of those patients with a known organic base from the rest of the group. Atkinson et al. (1981) demonstrate the extent of affective disturbance in low back pain patients as measured on the McGill Questionnaire, and Reading, (Reading et al., 1982) in a series of papers has described the various components of the pain experience.

Psychometric approaches to identifying functional groups will not be covered exhaustively here, nor will the psychiatric literature. However, it is clear that a person's cognitions, beliefs and physiological responses are highly relevant to treatment, since these interact so completely with the experience of pain (Maruta and Swanson, 1977). Gentry and Bernal (1977) have clearly described the development and maintenance of the pain - tension - pain cycle, where the pain response is common in pain patients, and can in itself create new pain problems. In fact, with acute pain we see a natural tense guarding of the painful site, in an effort to protect the body from more pain. This in itself can lead to problems of posture, tension headache, and so forth.

Anxiety management techniques (Sherman et al., 1979) are clearly indicated here. However, again, the problems of separating cause and effect of the personality, mood or level of tension on the pain experience are many (McCreary et al., 1980; 1982).

A detailed discussion of assessment of psychological factors will not be covered here. In fact, Bradley et al. (1978) examine

the evidence for psychopathology and conclude that it would be more advantageous for psychologists to spend their time developing categorizations for patient sub-groups and matching groups of patient behaviors with treatments, rather than continuing this quest to identify and separate the functional from the organic. However, it is obviously necessary when undertaking treatment for chronic pain to be aware of such significant psychological components as a contributory factor in the pain complaint, particularly when it can lead to simple methods such as anxiety management techniques.

Many reports on concurrence of mood change and chronic pain appear in the literature (Fielding, 1980; Melzack, 1961; Spear, 1967; Bond, 1978; Mersky and Greziack, 1977; Hendler and Fernandez, 1980; Pilowsky and Spence, 1975). Keefe et al. (1982) state:

> "clinical observation suggests that chronic pain patients are prone to report they feel depression, anxiety and have numerous physical complaints."

Mechanic (1962) first described "illness behavior", a concept which covers a collection of invalid behaviors which become maintained by the patient's environment. However, it is not always possible to delineate psychopathology or psychiatric disturbance from such behaviors, if indeed they are distinct. For instance, symptoms of passivity, inactivity and weeping could obviously be identified with depression, but may also be confused with "illness behavior" (Pilowsky et al., 1977), or helplessness (Seligman, 1975).

The mechanism of environmental maintenance of such behaviors will be covered later in the chapter, but it is necessary here to highlight the complexity of describing mood and personality factors in either a causal or reactive relationship to chronic pain. The way patients adapt to pain, and the way they interact with services provided, may also affect their future presentation and appropriate treatment approaches.

Cairns et al. (1976) describe the pain patient as passive, and suggest that therapy must start by:

> "shifting the patient from a passive role to becoming an active participant in his own rehabilitation" p 303.

Tan (1982) describes approaches strengthening the patients' beliefs in their ability to cope with pain, by reducing feelings of helplessness and depression. There is no doubt that individuals have a variety of cognitive strategies to deal with pain (Barber and Cooper, 1972). Turk et al. (1983) has collated his laboratory findings into six main coping strategies:

1. Imaginative inattention
2. Imaginative transformation of pain

3. Imaginative transformation of context
4. Attentional diversional (external)
5. Attentional diversional (internal)
6. Somatisation.

Keefe (1982b) has described the cognitive strategies that people use naturally in dealing with chronic low back pain. The most commonly used strategies appear to be helplessness and passivity, which as previously stated could relate closely to our definition of depression. This study would suggest that passivity and helplessness is a common experience for such patients, and Keefe recommends that treatment strategies could most usefully aim not at promoting the use of a particular coping strategy, but generally helping the patient to avoid "catastrophizing". In a series of papers he has been developing a Coping Strategy Questionnaire to estimate those used by chronic pain patients; secondly to look at the relationship between different coping strategies; and thirdly, to investigate the ways patients' coping strategies adapt to chronic pain. It is these kind of studies that will form the basis of future developments in cognitive treatments.

COGNITIVE METHODS OF TREATMENT

Cognitive treatment approaches are based on the assumption that cognitions affect the experience of pain. It seems important to separate the various different levels of approach and these vary from modifying the perception of pain to those methods helping patients increase their overall functioning, through cognitive changes. For example, if patients can read just their cognitions relating to feelings of helplessness and despair, so they can become more proactive on their environment. It is expected that changes in belief are followed by changes in behavior.

Turner and Chapman (1982b) review the cognitive behavioral therapy literature and conclude that evaluation is difficult, partly because of the private nature of the treatment and the lack of follow-up, and partly because of the use of different outcome measures, making comparison between treatments impossible. Tan (1982), also in a review paper, concludes that efficacy for cognitive behavioral treatment strategies is not yet proven. Apart from methodological problems of the lack of controlled studies, objective outcome measures and long-term follow-up, the insensitivity of the single pain measure, the difficulty of controlling patients cognitions and the use of student subjects etc., make the results difficult to compare. These authors also feel there has been inadequate attention to the matching of personal coping styles to the particular treatment method. However, in spite of these clear criticisms, reports seem somewhat encouraging, showing greatest effect on pain tolerance.

In treating pain perception, attention switch and distraction have been popular methods. Thelen and Fry (1981), Beers et al. (1979) and Clum et al. (1982) have used this approach with acute pain, and chronic pain programs will often incorporate elements of cognitive treatments.

Cautela (1977) describes covert conditioning, amongst other procedures, with an arthritic patient. Rybstein-Blinchik and Grzesiak (1979) show the effective use of three types of cognitive strategies for chronic pain, and suggest that focusing on the pain sensation itself can be useful. Patients were taught various strategies:

1. To reinterpret pain sensation
2. To switch attention
3. To focus on the pain

Though all the methods were effective to some extent, the authors assessed the use of "relevant" versus "irrelevant" focusing methods. it was seen that the most effective treatment was the use of "relevant" cognitions.

Levendusky and Pankratz (1975) reported another single case study using the relabelling of physiological cues. They found the combination of relaxation, covert imagery and cognitive relabelling helped the patient label the cues as "controllable". However, personal ability in such things as visualization may also be important. Spanos et al. (1975), working with experimental pain, found that subjects more "involved in their imaginings" increased their pain threshold more. Meichenbaum and Turk (1975) review other cognitive approaches and describe fully their own Stress Inoculation Technique, which may usefully be reproduced here:

> "The first phase, educational in nature, is designed to provide the subject with a conceptual framework for understanding the nature of stressful reactions. From such a conceptual framework a number of behavioral and cognitive coping skills are offered for the subject to rehearse during the second phase of training. During the third phase the subject is given an opportunity to practice his coping skills during exposure to a variety of stressors".

Such an approach has been found to increase both tolerance and threshold for pain in chronic pain studies. Stenn et al. (1979) find that when a variety of cognitive strategies are tailor-made to each patient they improve their perceived control of pain but, interestingly, this effect is enhanced by the addition of biofeedback. Hartman and Ainsworth (1980) report that there is an order effect, the cognitive/behavioral techniques producing better results after alpha feedback.

Hypnosis could also be included in this section on cognitive methods, perceived by some as an attentional focusing method, though adequately controlled studies have not been performed. Turner and Chapman (1982b) report:

> "hypnosis to decrease distress and increase tolerance and threshold for experimental pain" p 30.

They note its effectiveness with single cases with chronic conditions.

In summary, cognitive methods can aim to deal with both specific low level cognitive strategies, and also higher level beliefs in passivity and helplessness, for example, through contracting programs. Levendusky and Swett (1976) describe how a series of short-term targets, for example in social skills, can lead to a longer-term solution. The stages progressed by patients representing to themselves increasing control over their environment; thus their behavioral responses affect their higher level belief in coping.

Controlled studies are rare using cognitive/behavioral methods: Holroyd et al. (1977), with chronic headache pain, and Rybstein-Blinchik (1979), with mixed pain patients, did use control groups and generally found the cognitive/behavioral strategies to be more effective. Amongst the reviews of these studies Tan (1982) and Turner and Chapman (1982b) both conclude that in spite of a large number of methodological problems which make evaluation across methods and groups difficult, the approaches seem promising.

PHYSIOLOGICAL RESPONSES

Chronic pain patients often show highly sensitive physiological responses which can decrease with pain reduction (Glynn et al., 1981). Keefe et al. (1982a) review the literature relating a number of physiological responses to chronic pain, though EMG feedback is the most commonly used. The rationale for physiological retraining is three-fold:

1. Pain is stressful and can cause increasing physiological responses.
2. Stress responses in themselves can cause pain.
3. Relaxation training can result in a decrease of some symptoms (for example, phantom limb pain, Sherman (1980); myofacial pain, Stenn (1979)).

The exact value of biofeedback without relaxation training is clearly established with "headache and to some extent with temporomandibular joint pain", but these same authors (Turner and Chapman, 1982a) conclude:

> "There is reason to believe that its potentials for broad application in chronic pain management have been exaggerated".

Keefe et al. (1982) suggest:

> "single response training is too limited an approach for most chronic pain problems",

so in practice it is usually incorporated with autogenic training (Fahrion, 1973) or as part of a general treatment package (Keefe and Brown, 1982).

However, patients appear to vary considerably in the extent of physiological response to pain, in the extent that physiological responses are causing pain, and their appropriateness for retraining. As a stimulus for pain, certain responses such as muscle tension with headache (Phillips, 1977), or peripheral temperature with Raynauds disease (Keefe et al., 1980; Surwit et al., 1978), use retraining of that modality, though outcome results are equivocal. However, when used to reduce the anxiety component of pain it appears that biofeedback has no better effect than using relaxation alone.

BEHAVIORAL TREATMENT OF PAIN BEHAVIORS

These treatment approaches can be divided into:

1. Operant treatments
2. Self-management techniques
3. "Package" programs.

Operant Treatments

Fordyce (1968; 1974; 1976) has pioneered this work with chronic pain patients. This has placed the approach to the chronic pain patient within a theoretical framework and has led to systematic outcome research. His approach depends on the assumption that frequency of pain-related behaviors can be controlled by environmental contingencies. This could, for example, be through immediate family approval, avoidance of work, or a dependence on high sickness pay. Behaviors may be strengthened by direct and positive reinforcement of the pain behaviors, by the avoidance of aversive consequences, or by a failure of "well" behaviors to be positively reinforced.

The treatment approach is based on principles of learning (Fordyce, 1978). Thus, adaptive behaviors can be elicited and strengthened, clear behavioral targets set, and family and social contingencies altered to maintain the new behaviors established. Fordyce has pioneered this work, targeting mainly those voluntary

behaviors relating to pain, rather than treating the pain sensation itself. It can, however, readily be seen that these two factors interact. For example, the facial grimacing accompanying pain spasm can occur increasingly if patients and family respond with concern. There is some evidence indeed that spouses can develop unadaptive responses to chronic pain patients (Block, 1980). Keefe and Brown (1982a) discussed the progression from variable frequency pain behavior patterns which are elicited by tissue damage, and which gradually come under the control of environmental contingencies, and described this career from pre-chronic (6-12 months) to chronic pain. They recommend that earlier behavioral intervention is more effective than 2 to 3 years later when the behaviors are well entrenched and supported by the environment. They suggest to primary physicians, when managing the pre-chronic patient, that they:

1. Give time-contingent medication, no PRN, to reduce the association between pain and pain medication.
2. Recommend a gradual resumption of normal activity.
3. Give guidelines on "pacing" activities, rather than prescribing "rest".

This, they say, is an attempt to halt progress to a chronic stage. It would seem likely, however, that operant approaches are more likely to be effective where there are strong maintaining contingencies built up as Keefe describes, and where the patient has become increasingly less proactive on their environment, rather than where cognitive behaviors are more controlling.

Operant programs (Fordyce, 1978, Levendusky and Pankratz, 1975; Gentry and Bernal, 1977; Roberts and Reinhardt, 1980) have been reviewed by Turner and Chapman (1982b). They conclude that while it is often difficult to isolate the effectiveness of operant methods from other elements in treatment packages:

> "operant programs appear to increase physical activity levels and decrease medication use while the patient is in the controlled hospital environment".

However, it may not always be appropriate to measure success against increasing activity. There seem to be a significant portion of pain patients presenting in the clinic who indeed have a lot of difficulty pacing their activity, and for whom targets would include either a general reduction in activity, or a more appropriate distribution of their overall activity level.

In these programs such behaviors as grimacing, inactivity, weeping, drug-taking, job avoidance and pain complaint are reduced; "well" behaviors such as "up-time" and vocational work are strengthened using hospital staff and/or family for social reinforcement. Chapman (1981) reports using nerve blocks to reinforce increases in activity or decreases in drug-taking.

A variety of operant programs have been reported. Very often they are a large element of the treatment packages described later. Cairns and Pasino (1977) describe a controlled study showing the effects of verbal reinforcement by staff and information on performance levels, on activity levels with low back pain patients. They demonstrate the effect of verbal reinforcement in controlling activity. Varni et al. (1981) used a multiple baseline and reversal design with a single case study of a 3 year old child with chronic burn pain. In three different social settings social reinforcement was shown to increase "well" behaviors. Ritchie (1976) describes a token economy program incorporating an A.B.A. cross-over design with significant (but temporary) differences in control and experimental groups. Block et al. (1980) find that chronic pain patients systematically alter their level of pain complaint depending on whether they believe their spouse is watching, and their anticipation of the spouse response to them. This neat study clarifies the importance of discriminative cues for pain behaviors, and the interactive effect of the families' social surroundings on the pain complaint.

Self-Management Programs

At Duke University Medical Center in-patient program, there is a clear demarcation between those patients with a low activity rate who display clear "illness" behaviors and who are assigned to the operant program, and those who have difficulty moderating or "pacing" their behaviors. Ziesat et al. (1979) provide a definition of operant patients:

1. Physician unable to find cause of pain.
2. Physician unable to relieve pain.
3. Onset of pain coincides with initiation of physical activity.
4. Onset of pain causes patient to terminate activity.
5. Someone getting up (awakening) with patient to take care of pain.
6. Someone taking time off work to care for patient's pain.
7. Someone goes places with patient to care for pain episodes.

It appears, therefore, some therapists are making distinctions between those patients allotted to operant programs and those on self-management programs.

Of course, self-management programs will contain elements of treatment already referred to (biofeedback, relaxation, cognitive behavioral approaches, pacing activity, etc.), but the main objective will be to help patients recognize and alter the association between the environment, their pain and their pain related behaviors.

Programs may address the physiological, behavioral and subjective response patterns already referred to. However, the relationship between these characteristics is not too well recognized (Keefe, 1982a).

The highly controlled in-patient environment appears to be less recommended for self-management techniques than for operant programs, though this is clearly not true when the patients are highly drug-dependent. Here, close supervision is needed to ensure reduction of medication, often through "a pain cocktail". This is a three stage regime developed by Fordyce where:

1. A baseline is established where the intake is patient-controlled.
2. A gradual reduction of the medication the patient selected (or methadone equivalent) is accomplished over a few days with close medical observation, the medication being delivered in a highly flavored sweet syrup.
3. The final stage is where the patient is weaned off the syrup.

In general it is considered that this regime is more effective in the closely controlled hospital environment, or drug-dependency unit.

The problem of drug-dependency is indeed a considerable problem in the US (Ready et al., 1982; Maruta et al., 1979; Turner et al., 1982; Ziesat et al., 1979). Maruta et al. (1979) studied 144 patients referred for chronic pain to the Mayo Clinic. They found 24% were drug-dependent, 41% were drug abusers, and only 35% were non-abusers. Ziesat et al. (1979) show a higher incidence of drug misuse amongst operant pain patients than amongst non-operant pain patients. Thus the approach to drug withdrawal is seen as a fairly specific problem which must generally be conducted first, occasionally in a dependency unit, and certainly under strict supervision, before treatment for chronic pain begins.

One self-management program conducted (Gottlieb et al. (1977)) incorporated elements of EMG biofeedback, relaxation training, assertive training and a self-paced physical exercise program. Only 50 of the 72 low back pain patients completed the program, but they all improved somewhat on pain behaviors, activity and subsequent employment. Keefe et al. (1981b) report on a program for low back pain patients with similar components, though also incorporating a self-paced drug reduction program. Increases in activity, decreases in pain reporting and self-rating of tension, and analgesic reduction were noted in the majority of patients.

However, programs incorporating together elements of both operant and self-management approaches might also include a large compon-

ent of physical exercise (University of Washington, Seattle), and patient education (Newman et al., 1978).

It appears, however, that the emphasis of such programs is not based so much on outcome evaluation, but more on the facilities available, and the research interests and the financial basis of the supporting institution. For instance, psychotropic medication may be prescribed more often in a program directed by a psychiatrist than by a neurosurgeon.

Package Programs

Many programs offer a variety of operant, respondent, cognitive and educational approaches which have previously been described. (Swanson et al., 1976; Keefe et al., 1981b; Roberts and Reinhardt, 1980; Newman et al., 1978; Chapman et al., 1981; Anderson et al., 1977; Fordyce, 1976). Turk and Genest (1979) describe these as "blunderbuss all-inclusive approaches". Dependent on the population served, the skills and interests of the directors, the source of finance, and the disciplines contributing, U.S. pain clinics offer in-patient and out-patient services emphasizing a wide variety of medical, rehabilitative and coping approaches, as noted in the International Association for the Study of Pain, Pain Clinic Directory.

Swanson et al. (1976) describe their program under the headings:

1. Behavior modification: targets = activity, pain and mood reporting, pain behaviors.
2. Physical measures: anatomy class, physical therapy, O.T. and vocational planning.
3. Medical management.
4. Family member participation.
5. Other psychological approaches: Group work on pain-related topics.
   Biofeedback and relaxation.
   Supportive treatment.

Seres and Newman's (1976) program contains similar elements, though they emphasize more the educational component where patients learn more about their anatomy, physiology, pain mechanisms and medical interventions. The way this is conducted appeared to increase the patient's active participation in their own treatment. Other programs emphazise the preventive aspects, where the patient's progress from pre-chronic to chronic status is tackled (Keefe and Brown, 1982), or training for prevention of a recurrence of the injury, as the University of Washington, Seattle.

Though outcome from these programs appears promising, research is beset with methodological problems. However, as with evaluation

of specific treatments for chronic pain, considering the cumulative failures these patients often represent (but bearing in mind the lack of appropriate objective measures and standardization of patient groups and treatment components), outcome figures from these programs appear promising.

OUTCOME

Studies relating to outcome from treatment packages suggest cause for optimism (Malec et al., 1981). Fordyce et al. (1973) describe the earliest results from a package program. Targets included pain medication, activity and pain report, and significant results were obtained on these measures. Activity increases were maintained over a 22 month follow-up.

Swanson et al. (1978; 1979) report on 200 patients from their in-patient program. They find:

1. 59% improved at discharge.
2. 40% at 3 month follow-up.
3. 25% at 1 year follow-up.

Herman and Baptiste (1981), Gottlieb et al. (1977), Ignelzi et al. (1977), Roberts and Reinhardt (1980) and Chapman et al. (1981) all report encouraging results at varying lengths of follow-up (reviewed by Turner and Chapman, 1982b). However, Ignelzi et al. (1977) compared a multi-disciplinary pain program with surgery, and they found activity increases and medication decreases after discharge, but no differences between the two groups.

PREDICTORS TO OUTCOME

Recently attention has turned toward characteristics of those patients who are more and less likely to benefit from pain programs. Maruta et al. (1979) have developed a 7-point scale differentiating 71% successful and 86% unsuccessful outcome, using personal and clinical history, orthopaedic and neurological diagnosis, subjective pain levels and MMPI results. They noted the following findings:

		Success	Failure
1.	Duration of pain (month)	<36	>48
2.	Loss of work time (month)	<12	≥18
3.	Number of operations	0-1	≥ 3
4.	Pain level	≤ 5	≥ 7
5.	Drug-dependency		Dependency
6.	Raised hypochondriasis)		>80
7.	Raised hysteria) on MMPI		>80

However, there are other studies relating good outcome to other characteristics. Keefe et al. (1981a), with low back pain patients, found good outcome relates to report of less continuous pain, and higher level of pain report at admission. Swanson et al. (1978) find, in studying a group of 13 patients "dissatisfied" with their treatment on a pain management program, they were more likely than other chronic pain patients to be female, unmarried, to have had more hospitalizations (mean = 10) and to be on more medication and to be misusing it, to be accident prone, and have a raised "neurotic triad" on the MMPI (hysteria, depression and hypochondriasis).

Seres (personal communication) suggests that follow-up data on self-report of pain relates to family maintenance of "sick-role" behaviors, and secondly, to the extent of the patients rating of the educational component of the treatment package. The higher the rating on patient satisfaction with the educational component, the more positive the outcome at follow-up. Though this is not hard data is does suggest the difficulty in looking at interactive variables throughout the follow-up period in order to assess success of outcome.

There is also some discussion in the literature on whether pain level, medico-legal status and pain behaviors at admission are important indicators of outcome.

Pain Report On Admission

Keefe et al. (1981a) find a high level of pain relates to good outcome, and Maruta et al. (1979) find this with a lower level of pain; Swanson et al. (1979) find it unrelated to outcome. These apparent discrepancies no doubt demonstrate the inadequacy of our present methods of measurement (Reading, 1982; Keefe et al., 1982a) and variability of treatment methods and patient groupings.

Medico-legal Status

Chapman et al. (1981) find outcome is unrelated to legal position, though Swanson et al. (1979) find resistance to treatment programs relates to "medicolegal complications". Hammonds et al. (1977) compared two groups with similar disabilities finding that those successfully completing the pain rehabilitation program were less likely to be involved in litigation over their disability. Block et al. (1980) find pain complaint related to financial compensation.

Intuitively, it would seem the hope of financial gain would operate to maintain pain behaviors, though possibly it is simplistic to identify litigation alone as crucial. There are many other financial incentives to be considered.

Pain Behaviors

Keefe et al. (1982a) make a strong plea for observational methods to study pain behaviors (Rybstein-Blinchik, 1979), concluding that a high range and frequency of observed pain-related behaviors on activity relate to poorer outcome (personal communication). This corresponds well to a study by Swanson et al. (1979) where a high level of verbal and non-verbal pain behaviors on the first three days of the program relates to poorer outcome.

SUMMARY

An attempt has been made to briefly review the literature relating to psychological treatments for both pain sensation and pain-related behaviors using the generally adopted distinctions between physiological, cognitive and behavioral methods.

Package programs are described and outcome studies are reviewed. Though these evaluative studies are beset with methodological problems, the outcome for such a recalcitrant group seems encouraging.

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COGNITIVE-BEHAVIORAL TREATMENT OF CHRONIC PAIN

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Fordyce (1978) defines pain as "... an unpleasant experience which we primarily associate with tissue damage, or describe in terms of such damage, or both... and the presence of which is signalled by some form of visible or audible bahaviour." In trying to explain the onset, maintenance and relief of pain to our chronic pain patients using a psychological perspective, we seek psychophysiological mechanisms which operate rapidly to mediate underlying pain neurophysiology. Given our present limited understanding of pain phenomena we may have to sacrifice validity for a plausible explanation in which patient and therapist can share some confidence, and from which treatment objectives can be developed.

The central thesis of this paper is that anxiety and pain are probably integral parts of the body's response to physical and psychological threat. For this reason pain may contain sensory and affective components, as indeed emotional disorders often include complaints of pain. When the body is threatened adrenalin and noradrenalin circulate to prepare and maintain a fight-or-flight response, and the 'pain gate' (Melzack, 1973) may be kept open by inhibition of the body's natural analgesics (Kosterlitz, 1977), thus denying pain relief until the threat has passed. Any reduction of threat would stimulate the body's ability to cope with and control pain changes in a patient's thoughts, feelings and behaviour.

POSSIBLE ROLE OF ADRENALIN AND ENDORPHIN IN RESPONSE TO THREAT

It is important that the 'pain gate' remains open following threat so that sites of disease or injury can be rapidly identified, leading to an avoidance reponse and healing attention. The early

death of individuals born insensitive to pain points to the value of a pain signal. However, just as the anxiety response in phobics can operate in the absence of objective threat, so the pain signal may come too late for remedial action to be taken, as in terminal illness, or continue to operate past healing time in chronic pain. Perhaps endorphins are always in circulation, but their level increases following threat, injury or disease; and aside from providing pain relief they may also be involved in the healing process as a precursor of other biochemical reactions. Whatever the details of the underlying biochemistry, the body's response to any perceived threat from pain will involve an individual's thoughts, emotions and behavior as part of the motivational-affective aspect of pain.

How might thoughts, emotions and behavior be involved in the learning of the motivational-affective dimension of pain onset, maintenance and relief? Briefly, on the basis of previous pain experience an individual may ruminate about the possible threatening nature or consequences of pain; become anxious, angry or depressed when the pain is without relief; and from a behavioral point of view, an attitude of threat is maintained by reduced general activity and avoidance behavior which aims to protect the pain site and prevent further damage. Other pain response bahavior would include taking analgesics and seeking too much health care and sympathy from doctor, family friends and employer. Perhaps separately, or together, these reponses of the pain patient may have the effect of keeping the 'pain gate' open by inhibiting endorphin circulation, and treatment, therefore, should be broad enough to take simultaneous account of each psychologial component.

This is why a cognitive-behavioral approach seems useful, especially when we cannot be sure which component is making the greatest contribution to maintaining the posture of threat towards the pain experience, and where that experience is influenced by an individual's unique past history, meaning given to the current pain, and the present state of mind. It also seems possible that the body's response to the threat of pain may be maintained by a mechanism of subliminal perception which seems implicated in some anxiety states. For example, at a conscious level the pain patient may deny feeling threatened by chronic pain, but monitoring of autonomic variables during pain or recollection or such an experience suggests a different attitude, as do anxious, angry and depressive reactions to pain. Occasionally a phobic patient may be unable to explain a sudden anxiety reaction in a particular situation, but later very careful examination reveals the presence of a phobic stimulus apparently 'unobserved' by the phobic.

Like anxiety, pain can have an adaptive function without being unbearable, nor need it be enjoyable as in masochism to be bearable, but is tolerable and easily relieved in the absence of significant threat. It is the threat of pain that motivates the patient to seek

excessive health care. It is the threat of pain that leads to the development of anxiety, anger and depression. It is the threat of pain that leads to reduced activity and avoidance behaviors. These motivational-affective aspects of chronic pain often attract only a narrow treatment approach with limited results.

Just as tranquillisers are time-limited in treating phobic disorders because they selectively affect emotions with some form of Dutch courage while the cognitive and behavioral components of the problem, so analgesics are, with prolonged use, limited in benefit. In time the body habituates to the drug and the pain returns. The patient can be left sedated, dependent, but now without pain relief. Again, the cognitive and behavioral components have been left untouched by medication even though they consititute two thirds of the body's response to the threat of pain. Any treatment that reduces the threat of pain will reduce the motivational-affective or suffering aspect of pain and the possible potentiating effect it has on the sensory aspect or pain threshold.

ENDORPHINS, ANXIETY AND PLACEBO REACTIONS

The gate control theory of Melzack and Wall (1965) proposed that nerve impulses from afferent fibers to the spinal cord transmission cells are modulated by a spinal gating mechanism in the dorsal horns, and that this mechanism may be further modulated by descending nerve impulses from the brain. It is thought that the main chemicals involved in the gating system of pain control are naturally occurring opiates, or endorphins released from a number of depots in the body including the dorsal horns, hypothalamus, pituitary and adrenal medulla. Just as it has been suggested that endorphins may inhibit substance P, released from pain fiber terminals, it may be that catecholamines potentiate the release of substance P and as a result reduce pain threshold and tolerance. There is clearly a delicate balance between anxiety and pain, made difficult to understand by our limited ability to objectively measure the essentially private experiences of anxiety and pain. In a study by Hill et al. (1952), subjects with induced anxiety reported significantly higher intensities of pain. These same experiments demonstrated that morphine decreased pain significantly when a subject's anxiety was high, but had little or no effect on low anxiety subjects.

Studies of the placebo response may help us to identify the psychological mechanism that mediates pain relief, because it must function via cognitive-affective pathways even if it does result in a biochemical reaction which relieves pain. Psychological mechanisms associated with the placebo effect would include social influence effects such as suggestion, persuasion and operant conditioning; expectancy affects such as hope, cognitive dissonance and classical conditioning; and thirdly, evaluation effects such as response artifacts, labelling and misattention (Shapiro, 1978).

Another aspect of the placebo effect might include becoming less sensitive to normal bodily reactions following treatment. In a questionaire study by Reidenberg and Lowenthal (1968) of healthy university and hospital staff taking no medications, 81% of subjects reported that they had experienced, in the previous 72 hours, one or more of 25 listed symptoms normally reported as side effects, during drug trials, in active and placebo drug groups. Add to that, that the effectiveness of a placebo is directly proportional to the apparent effectiveness of the active analgesic with which it is being compared, i.e. a constant 56%, and we see just how finely balanced pain control is. The further observations by Evans (1974), that the placebo is indistinguishable from the active drug being mimicked in terms of dose-response, time effect curves and side effects, and that about 35% of patients will report significant pain relief from a placebo, raises many more questions than it answers about the psychological mechanisms that mediate pain relief.

SIMILARITES BETWEEN CHRONIC PAIN AND PHOBIC DISORDERS

Patients seen in the pain clinic have undergone extensive investigations and treatments over a long period and yet often no physical explanation can be found for their continuing pain, and no treatment has proved effective in relieving their pain. Even so, this should never encourage us to deny the validity of their pain, but to consider psychological mechanisms that may be contributing to its maintenance. Wall (1978) reports a large number of nociceptor fibers have been found in the body, and that some of these may become sensitized by prolonged and repeated noxious stimulation so that their threshold drops and they are excited by normally innocuous stimuli. The significance of maladaptive learning here should be noticed. Similarly, in phobic disorders constant rehearsal or repetition of thoughts, emotions and avoidance behavior associated with the original experience will lead to the sensitizing of an individual, and the development of cognitive, emotional and behavior habits which constitute the phobic disorder, and another example of maladaptive learning in the absence of objective threat.

One wonders whether the chronic pain population are special in other ways than having persistent pain. In spite of the large number of threatening situations that most of us meet in our lifetime, very few develop into phobic reactions, and this is confirmed by the fact that phobic disorders constitute only 3% of psychiatric outpatients, even accepting that many phobics do not seek treatment. This suggests that phobics might be different in themselves from nonphobic rather than in their threatening experiences, as such. What is the incidence in the general population of acute pain developing into chronic pain past healing time for the orginal injury or disease? What is the incidence of chronic pain in the absence of underlying pathology? Perhaps separate models of acute and chronic pain are

required, where psychological mechanisms that mediate the learning of chronic pain are dominant, and may be responsible for pain onset and maintenance.

Both phobic anxiety and chronic pain share certain charateristics: i) both may arise from the perception of an external or internal threat to the body; ii) both represent intregral parts of a defence response which leads to avoidance reaction; iii) both pain and anxiety may exist in the absence of objective threat and yet stimulate catecholamines; iv) both may be modified by medication, cognitive restructuring, hypnosis and contingency management. For these reasons one is inclined to regard some chronic pain, for the time being at least, as a variation on a phobic disorder as a helpful perspective even though it may turn out to be invalid. Further, the loose association between high anxiety subjects and high intensity reports of pain, with the opposite being true, adds additional support to the thesis of this paper regarding the significance of threat to the experience of pain.

Merskey (1975) suggests that perhaps once we have learnt the skill of feeling pain we may recall specific pains on the basis of mnemonic traces, which may be highlighted or revived by physiological or psychological inputs. He reports a study by Reynolds and Hutchins (1948) on dental fillings under local and general anesthetic, which suggests that a central pain trace can be laid down in the absence of conscious experience, i.e. when under general anesthetic, but is not laid down when the afferent pathways are blocked by a local anesthetic. This 'never before' experience of pain can later be revived by indirect stimulation. This reminds us of the 'hidden observer' concept in hypnosis. Where one part of a hypnotized subject reports pain and another part denies it. Hilgard and Hilgard (1975) describe the concept of a 'hidden observer' as "...a metaphor for something occurring at an intellectual level but not available to the consciousness of the hypnotized person." It reminds one of a possible role for subliminal perception in reviving and maintaining previous experiences of anxiety and pain, which in treatment we find so resistant to extinction.

TREATMENT OF CHRONIC PAIN

If there are a variety of treatments that may be effective for psychological disorders in general, and chronic pain in particular, there may be common factors to all treatments that are successful, influencing common factors in the patient. Frank (1963) says that the shared features of different psychotherapies are elicitation and maintenance of the patient's hopes, intensification of his state of emotional arousal, and enhancement of his sense of mastery through provision of success experiences. This is consistent with the view that improvement in psychological treatments is a result of creating

and strenghtening expectations of personal efficacy, based on performance accomplishments, vicarious experiences, verbal persuasion, and states of physiological arousal (Bandura, 1977; Biran and Wilson, 1981). In viewing chronic pain as a variation on a phobic disorder one treats the patient holistically, and accepts that the continuation of pain and asociated suffering does not require an objective threat, yet does not deny the validity of the painful experience. One is also reminded, having treated phobias, that to change pain habits expressed through a patient's thoughts, emotions, and behaviors will often require protracted treatment, with rapid improvement being the exception rather than the rule. Further, with the patient's belief in the specificity theory pf pain, i.e. no pain without pathology, the patient may find it difficult to accept a psychological treatment perspective for what appears to be a clear example of pain caused by a physical disorder, which as yet remains unidentified and untreated successfully.

However, whatever the treatment, its chief objective is to relieve the suffering and threat that springs from pain, and to rehabilitate the patient to premorbid activity levels. These levels may still include pain sensation, but without motivational-affective aspects which compel the patient to seek unnecessary medical and surgical interventions. For the reasons already outlined, a broad cognitive-behavioural treatment approach is used, and according to the needs of a particular case may include: cognitive restructuring (Meichenbaum, 1977; Meichenbaum and Turk, 1976); hypnosis (Cheek and Le Cron, 1968; Kroger and Fezler, 1976); and contingency management (Fordyce, 1976; Roberts, 1977; 1981).

COGNITIVE RESTRUCTURING

Typical comments from pain patients include: "I get scared when my pain starts because something must be going wrong inside me;" "If the doctors don't find the cause of my pain soon, it will be too late to do anything about it;" "It's alright for the surgeon to say that I'm imagining my pain, but I might have detected cancer;" "I suppose that because I have been referred to you, they think I'm a psychiatric patient." These comments may typically be accompanied by emotions of relief, anxiety depression or anger.

It is suggested to the patient that if they have mislabelled their pain as 'threatening', in the absence of objective threat then their emotional responses are natural given that, in their view, they most certainly have not received a satisfactory explanation or treatments for their pain. 'Cognitive restructuring' helps the patient to relabel their pain experience as non-threatening.

Firstly the patient is told that when pain returns or becomes uncomfortable they should avoid a panic reaction which only exag-

gerates pain, but rather describe possible non-threatening reasons for the pain. They should also recall evidence which shows that there can be pain without pathology, pain with pathology, and pathology without pain in order to modify their strict specificity theory of pain.

Secondly, the patient is asked to take a detached look at their pain experience, without reference to previous feelings of threat or anxiety, and recall that all medical investigations to date have been negative throughout the months or years of suffering, and as usual, the pain will subside without need of medical intervention.

Thirdly, on the basis of (i) and (ii), the patient is encouraged to relax and breathe more slowly and deeply to reduce body tension and promote mental relaxation. As soon as some feeling of control has been achieved the patient is advised to become involved in pleasant distracting thoughts, and then continue behavior relevant to the situation they were in before the pain became uncomfortable. These ideas will be reinforced in hypnosis with suitable patients.

A married man, aged 34, was referred complaining of continuous pain in the chest following removal of a left rib two years earlier, and had not worked since. Under stress the pain became unbearable, when his wife would put him to bed with analgesic. His wife and children would then sit by the bed and comfort him. He was receiving invalidity benifit, and had been advised to consider lighter employment. Pain prevented him giving that serious thought, but concentrated his mind on his disability. Treatment consisted of cognitive restructuring, during which time the patient admitted that his pain indicated cancer, and this seemed to lead to a curcular habit of pain-threat-anxiety-tension-pain, and cessation of activity for some hours in order to control pain and prevent damage. The patient was taught relaxation; to gradually increase general activity level even when pain was present; and to reduce pain medications. Six months later the patient reported that he had given up over-protecting himself, had only occasional pain sensation unconnected with activity, and was looking for employment. It would be too much to expect a cognitive-behavioural treatment to remove all pain. A more realistic objective is to rehabilitate the pain patient without the suffering or motivational-affective dimension of pain.

A married woman, aged 31, was referred with a two-year history of bilateral lower abdominal pain which had received various treatment including exploratory surgery, hormone therapy, analgesics, acupuncture and nerve blocks, all of which proved ineffective. Treatment involved cognitive restructuring and an opportunity to work through considerable marital conflicts. Within two months of starting treatment the patient was able to report an absence of suffering in her occasional pain, and a more positve attitude about her marriage.

HYPNOSIS

Although many argue that hypnosis is without valid and reliable indices, and is only useful for teaching relaxation to pain patients, my limited experience suggests that it has a wider use. Using the framework of the 'rapid induction analgesia' technique of Barber (1977), specific objectives include: i) relaxing the patient; ii) modifying the threatening thoughts, emotions, and behavior by influencing conscious, and unconscious (subliminal) perceptions; iii) providing pain relief by direct and indirect suggestions with a view to breaking the circularity of the pain habit, i.e. pain-threat-anxiety-tension-avoidance behavior-pain; and finally, iv) promoting general ideas of healing and improved self-esteem.

A married woman, aged 29, was sterilized shortly after the birth of her second child six years earlier, and from that time had experienced eight days of agony between day one to ten of her period. During this time the patient reported feeling anxious, tense and irritable. All medical investigations were negative and the patient refused to take analgasics. During three sessions of hypnosis it was suggested to the patient that unless the pain had important signal value the pain, anxiety and tension would reduce in its intensity and duration within two months. Within two months the patient was free of all period discomfort, and has remained so on a nine month follow-up.

CONTINGENCY MANAGEMENT

Any treatment of chronic pain that ignores the patient's behavior reduces the chances of lasting results. Fordyce (1979) reconceptualizes the problem of chronic pain from a disease model with the implication of pathology or emotional disorder, to a behavioral model which concentrates on pain behavior and the systematic reinforcement that may become contingently attached to it, i.e. the development of operant pain. If systematic positive consequences follow pain behavior they can have the effect of increasing its size and frequency.

If, following a minor injury at work which results in pain your doctor suggests that you avoid work and rest to ease the pain, and gives pain contingent medication, and leaves it to you to decide when you are ready for work, you have all the ingredients for developing operant pain behavior. Should you not enjoy your work, the pain continues, and a union officical mutters something about unsafe working conditions and compensation, in time there is a chance that the positive reinforcements will maintain your pain behavior rather than the pain itself, especially if your family become involved in supplying reinforcement by over-protecting you and discouraging activity or well behavior.

For these reasons, in contingency management treatment, patients are encouraged to gradually reduce the variety and quantity of pain medication, increase their general activity level if medically prudent to premorbid levels, which involves in vivo practice of pain tolerance, and to actively reduce the attention they receive from self and others for their pain problem. Where possible the spouse should be actively in the treatment program by withdrawing positive reinforcement from pain behavior and attaching it to well behavior.

A married woman, aged 45, was referred complaining of lower back and limb pains, and physical activity had slowed down so much it was thought she might be suffering from hypothyroidism. The pain had continued for two years during which time the patient had given up work, become over-dependent on pain medication, and encouraged her husband to reinforce her pain behavior. Treatment involved cognitive restructuring, hypnosis to resolve past emotional conflicts, and most important reduction of medication, systematic increase of activity levels and change in spouse reinforcement. On a six month follow-up the patient has returned to work and resumed almost premorbid levels of activity, though occasional pain returns.

CONCLUSIONS

In trying to develop a workable treatment perspective of the somewhat abstract concept of chronic pain we are reminded that there is both a physical and mental dimension to pain experience. However, sometimes we have more information on one dimension than on the other, and this may lead us to neglect the aspect we have least information about. A patient with terminal cancer pain may be told that in spite of his obvious pain and suffering, he cannot be given extra analgesics because they may cease to be effective when they are needed at the end of his illness. Or, a patient whose investigations concerning the origin of her pain have all been negative, may be told that her pain is imaginary, and continuation of her pain medications is best avoided to prevent addiction. Sadly, these transactions are not uncommon, and should remind us of the need for a broad treatment perspective which takes account of the sensory and suffering components of pain expressed through a patient's thoughts, emotions, and behaviors.

This paper has argued that chronic pain is often associated with a motivational-affective dimension which potentiates, and can maintain, the sensory dimension, and is associated with the body's response to direct or indirect threat. Indirect threat, such as employment or marital problems, can still contribute to the motivational-affective dimension of pain, and like direct threat perhaps, inhibits endorphin circulation and the healing process. Any treatment, therefore, that reduces or removes threat can promote relief of suffering and successful rehabilitaion in the chronic pain patient.

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MENTAL HANDICAP: THE FEASIBILITY OF NORMALIZATION

MENTAL HANDICAP: THE FEASIBILITY OF NORMALISATION:

AN INTRODUCTION

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NORMALIZATION AS AN INFLUENCE ON THE DEVELOPMENT OF SERVICES FOR PEOPLE WITH MENTAL HANDICAP

In this brief contribution I would like to draw attention to some of the changes which have taken place in the ways we talk about, plan and deliver services for people with mental handicap. Alongside trends in service delivery over recent years there has been what might be described as the "normalization movement". As someone who has approached mental handicap services from a behavioral perspective, normalization offers certain challenges and I outline my attempt at viewing normalization through a behavioural framework. The papers in the symposium which formed the basis for this section of the book illustrate very clearly the various levels at which normalization appears to influence services for people with mental handicap. Finally I add some thought about the future and the activities which in my view are required of people who plan and deliver services if the momentum towards normalization is to be sustained.

Over the last ten years or so there have been significant changes in the approach of many people towards those with mental handicap. The way we talk about such people and their problems has changed substantially. Terms such as "the subnormal," "the mentally deficient" or even "the mentally handicapped" are no longer acceptable to an increasingly large number of people. Instead, many are now talking about "people with mental handicap" in an effort to emphasise the fact that we are talking first about human beings who may, in addition, have some individual problems. Issues such as the autonomy, independence and human rights of people with mental handicap are now receiving considerable attention.

Statement of the aims of services have also changed. Many policy documents now emphasize the need to help people with mental handicap to become participating and accepted members of the community. As Paul Williams emphasized, this contrasts strongly with previous policies which emphasized "segregation" or "treatment".

As well as changes in philosophy, real changes have taken place in the actual provision of services. In residential services, it is no longer current practice to provide purpose-built accommodation for several hundred people on one site. Indeed, the terms of the "numbers debate" are changing constantly. Many authorities are now questioning the value of accommondating 25 people on one site whilst those who are housing 6 or fewer people in ordinary houses are seeing advantages in providing accommodation in even smaller groups or for individuals in ordinary housing.

The emphasis of services has shifted in recent years from mere containment towards the provision of skill training, and opportunities for people with mental handicap to engage in a wide range of everyday activities. The role of clinical psychologists, in particular, has changed from providing what was essentially an IQ testing service towards designing and implementing individual skill training programs.

At the same time as these shifts in emphasis of policy and practice there has been a growth in Britain of what might be called the "normalization movement". Networks of individuals have been established throughout the British Isles who have been discussing and promoting the ideology of normalization as expounded by Wolfensberger (1972). There is now quite a substantial network of practitioners, planners, managers, consumers and researchers who have attended conferences and workshops on normalization and who have gained experience in the use of Program Analysis of Service Systems (PASS - Wolfensberger and Glenn, 1975) as an evaluation instrument.

Whilst it is not possible to demonstrate causal links between the spread of the ideology and changes in the development of services, it certainly is possible to see parallels between the two sets of phenomena. Much of the verbal repertoire of normalization is reflected in current plans and ways of describing services. Also, many of those who have had a substantial influence on the development of services have been involved in normalization workshops.

Attempting to explain the influence of normalization is an interesting exercise for one who has attempted to interpret service development issues in behavioral terms. A behavioral approach puts a great deal of emphasis on the tight control of contingencies of reinforcement within a particular setting. For example, pre-school services of the "Portage" type have been carefully designed so that there are clear antecedents and consequences for the child, parent

and home teacher to behave in particular ways. The system involves prompts and social praise at each level and a fairly predictable pattern of service emerges.

The influence of normalization is nowhere near as explicit. One interpretation of the normalization movement is as a "verbal community" which sets the occasion for certain ways of talking about and acting towards people with mental handicap, socially reinforcing those responses and socially punishing others. For example, it would not be socially accepted, within the context of a normalization workshop, to talk about the "sub-normal" or to propose the building of a 250 place residential unit. Indeed, proponents of normalization have objected strongly to some of the expressions used by for example, members of the medical profession in describing the supposed characteristics of some people with mental handicap (see Paul William's paper). A lesson that some of us can perhaps learn is not to ignore the influence of an ideology and of a verbal community supporting that ideology.

It is clear from Paul William's paper that normalization has a relevance to a wide range of issues concerned with sevice delivery, and the other papers in this symposium are a good reflection of this. The discussion of the sexual needs of people with mental handicap is concerned with important issues at the individual level. Normalization has important implications for the design of individual programs which aim to help people with mental handicap to become valued and participating members of society. Interestingly, part of the discussion following Michael Craft's paper questions some of his assertions which appear to suggest that some people with mental handicap are in some ways different from the rest of Society; for example, that 10 per cent of severely handicapped people have reduced sexual needs. At one level, then, normalization ideology is reflected in the design of services at the individual client level. Notions such as "individual plans" (e.g. Blunden, 1980) and other ways of providing handicapped individuals with some counter control over the service delivery system (see Skinner, 1959) are strongly encouraged. The notion of "intensity of relevant programing", which features prominently in the normalization philosophy, places a strong emphasis on the need for individual programs to be both effective and relevant to the needs of the individual.

Derek Thomas's paper illustrates a second level of influence of normalization - the design of entire services. Consideration of the effects of services upon people with mental handicap and upon the rest of society leads to radical departures from traditional services planning. Service planners have traditionally operated in terms of the provision of buildings for specific purposes - day units, residential units, special care units, training centers, etc. Normalization sensitises planners to the needs of individuals. It also places considerable emphasis on the ways that people with mental

handicap are portrayed to society by the services provided. When these considerations influence planning, the emphasis shifts away from "units" to ways of meeting individuals' needs in ways which do not set them apart from the rest of society. Thus one can see a move towards the provision of accommodation in ordinary houses in the community and staffing levels geared to meet the needs of individuals. The same considerations apply in the provision of other services and we can now see plans (for example, Welsh Office, 1983) and actual services (e.g. Mathieson and Blunden, 1980) setting out a comprehensive pattern of residential, domiciliary and other provision influenced by considerations of normalization.

Normalization also has implications at the societal level. One illustration of this is Peter Edward's paper on the implications of the new Mental Health Act. Should people with mental handicap be seen as a separate group in society, requiring special protection and legal requirements, or should society's way of conducting itself cater for a range of people having a range of skills and abilities? Whilst there is a clear need to protect those who may find it difficult to look after their own interests, it is clear that much of the proposed legal provision for people with mental handicap is more concerned with protecting society from these people. Normalization has major implications for the way society treats its less advantaged members.

It seems to me then that the normalization ideology is having a substantial influence on the development of services for people with mental handicap. The extent to which normalization is a causal influence rather than a part of the general movement is not clear to me, but I am not sure a potentially unanswerable question is of much importance. What is important is that we have a verbal community which is able to influence service delivery at a number of levels. My one concern is that it is possible to have a strong verbal community, saying the right things, without a corresponding development of services. Whilst acknowledging the very considerable contribution made by normalization, I would add a plea for similar amounts of attention to be given to the practicalities for arranging contingencies at the client, family and service level so that the new forms of service work in practice. As well as the discussion, we need people such a Derek Thomas and his colleagues in Nothumberland who are committed to finding practical ways of implementing high quality service. This is no easy task, but only by concentrating on both sets of issues, the ideological and the practical, can we continue the momentum that has been started.

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THE NATURE AND FOUNDATIONS OF

THE CONCEPT OF NORMALIZATION

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INTRODUCTION

Normalization is an ideology. Its adherents are motivated not so much by extensive empirical evidence of its feasibility or efficacy, as by a belief in certain values - like the importance of achieving and maintaining good social relationships with others in the mainstream of ordinary community life - and a vision of the future, in which handicapped and disadvantaged people are not cast out from ordinary society, but are enabled to remain within that society as valued, contributing, respected members.

The concept of normalization has its origins in Scandinavia in the late 1950s and 1960s (Nirje, 1969; 1970). Its fuller development has, however, taken place in the USA and Canada, based on the theoretical and practical work of Professor W. Wolfensberger, now at the University of Syracuse in New York state. This paper tries to give an elementary picture of the nature and foundations of the complex concept of normalization as developed by Wolgensberger and his colleagues. Further information can be found in Wolfensberger (1972), Wolfensberger and Glenn (1975), Flynn and Nitsch (1980) and O'Brien and Tyne (1981). Information about training courses in the principles of normalization can be obtained in Britain from: The Community and Mental Handicap Educational and Research Association, 16 Fitzroy Square, London W1P 5HQ, and in America from: The Training Institute for Human Service Planning, Leadership and Change Agentry, University of Syracuse, 805 South Crouse Avenue, Syracuse, New York 13210.

Normalization is a general framework that can be applied to any handicapped or disadvantaged people. It has been developed, by

people with a special interest in mental handicap, and much of the literature and teaching available on normalization tends to concentrate on its application to mentally handicapped people. This paper will also present normalization in the context of mental handicap, but it should be appreciated that it has general applicability to any situation where handicap or disadvantage is associated with a high risk of social devaluation. The principles have been applied to client groups as diverse as mentally ill people, children in care, homeless people, people with drug or alcohol problems, young people with delinquency problems, rape victims, elderly people, physically handicapped people, and people who are dying.

THE IMPORTANCE OF A SOCIOLOGICAL PERSPECTIVE

As an ideology or philosophy or set of principles, normalization is based on a particular kind of analysis of the nature of the "problem" for handicapped or disadvantaged people. Traditionally, there have been two major types of analysis that have been prominent. First, there is the medical view that seeks an analysis in terms of physical characteristics, biochemical or genetic mechanisms, and concepts of abnormality of development or functioning of body, brain or mind. Second, there is the psychological or educational view that seeks an analysis in terms of skills, abilities or behavior, learning or motivational mechanisms, and concepts or intelligence or reasoning. A third type of analysis - the sociological one - has been relatively neglected, especially in its application to the problems of those people we label "mentally handicapped".

The sociological approach to handicap seeks to analyze the ways in which handicapped people, who start off merely being <u>different</u> from others in physical or intellectual abilities, embark on a career of <u>devaluation</u> and have numerous additional handicaps and disadvantages superimpsed upon them by the attitudes and behavior of other people in society towards them.

Knowledge and understanding of sociological analyses of the difficulties of clients is just as important for clinical psychologists as knowledge and understanding of medical or psychiatric analyses. Indeed more so, since sociological analysis shows us the ways in which we and our fellow professionals play a powerful role in the social process of devaluation and the creation of negative and unhelpful perceptions of a person by others. Moreover, at least in the British health services for mentally handicapped people at present, many clinical psychologists are as involved in the multidisciplinary planning of the future as they are in individual clinical work; and for this planning a sociological perspective is essential.

PERCEPTIONS OF THE SOCIAL ROLE OF HANDICAPPED PEOPLE

The social process of devalution is observed in the social roles that handicapped people often find themselves cast in by others. Wolfensberger (1972) identifies eight such social role perceptions that are particularly damaging: the handicapped person as sub-human, as a menace, as an object of dread, as an object of pity and burden of charity, as a holy innocent, as sick, as an object of ridicule, and as an eternal child.

As Sub-human

Historically, mentally handicapped people were considered to be less than fully human. Institutions were built without the ordinary comforts of a home because mentally handicapped people were not considered to have the same human feelings as other people (Wolfensberger, 1975). Even today, we have managed to coin the term "subnormal"- perilously close to "sub-human". Only a few years ago a working party of the Anglican Church in Canada, considering church policy on euthanasia, talked of "the grave mistake of treating human-looking shapes as if they were human." (Shearer, 1981).

As a Menace

Early this century, mentally handicapped people were considered a eugenic threat and large numbers of relatively mildly handicapped people were placed in institutions where the sexes were segregated. Today, many attempts to establish new community residential services for mentally handicapped people are met by objections, often based on erroneous notions of the "danger" to local people, children, pets, property or property values.

As an Object of Dread

Throughout history the birth of a handicapped child has been seen as the result of evil forces. The "dreadful" perception of handicap was often encouraged by public exhibition (Fielder, 1981; Howell and Ford, 1980; for an alternative perception see Drimmer, 1976). Most handicapped people today will have experienced people crossing over to the other side of the road rather than meet them.

As an Object of Pity and Burden of Charity

A common historical response to the problems of handicapped people has been for religious groups or others to "take pity" on them and provide some basic services out of a sense of charity. A recent

editorial in the British newspaper, the 'Daily Star', following a report of a group of mentally handicapped people being denied admission to a pub in Cornwall, described the people concerned as "these pathetic charges and their saintly helpers" (Daily Star, 7th July 1982). Voluntary organizations often portray handicapped people as pathetic in order to gain charitable money through evoking a sense of pity. The Royal Society for Mentally Handicapped Children and Adults has a logo depicting a pathetic, sad-looking child. The Spastics Society makes extensive use of a pathetic doll-like model of a child with calipers and crutch, situated outside shops to raise money.

As a Holy Innocent

In some cultures mentally handicapped people are revered as holy "children of God", being regarded as without original sin. They still usually end up deprived, rejected and segregated from the mainstream of social life. A letter in another British newspaper, the'Daily Mail' recently, following a television series called "Horace" - attempt to dramatise the adventures of a supposedly mentally handicapped person - gave an insight into the way this unhelpful social role perception can easily be evoked in the public's mind: "The program can surely only help the more fortunate among us to a greater understanding of these truly lovely innocents." (Daily Mail, 3rd May 1982).

As Sick

We very strongly encourage a "sickness" perception of mental handicap in Britain, where 50,000 mentally handicapped people are cared for in places called "hospitals" by people called "nurses", under the supervision of "doctors" and within the management of the "health service". At the trial in England in 1981 of Dr. Leonard Arthur, at which he was found not guilty of the attempted murder of a baby with Down's syndrome, a witness for the defence described Down's syndrome as "a timebomb of disease."

As an Object of Ridicule

The mentally handicapped person as a jester is a well-known historical image; the "village idiot" was often an object of fun and teasing. Even today the environments in which mentally handicapped people find themselves often have a high proportion of clown images or "silly" images in them. A series of posters is available showing monkeys in various humorous situations - wrapped in toilet paper, cleaning their teeth in a toilet bowl, etc. An extremely large number of establishments where mentally handicapped people live or work have these posters prominently displayed - reflecting an often

unconscious role perception of the handicapped person as "fool". For some mentally handicapped people the major content of other people's conversation with them may consist of jokes or supposedly humorous remarks.

As Eternal Child

The notion of "mental age" may have had some technical scientific use, but as a more generally used idea it has been disastrous. It has led people to perceive mentally handicapped people as eternal children, looking 40 years old but "really a two-year old inside." Some leisure clubs for mentally handicapped adults are actually called "Peter Pan Clubs". (Peter Pan was, of course, the boy who never grew up). Many mentally handicapped adults have always been treated in every aspect of their lives, even including clothing in some instances, as children. They have the behavior, possessions and experiences of children; and they are only accorded the same rights, responsibilities, dignity and respect as small children.

THE MAINTENANCE OF DAMAGING SOCIAL ROLE PERCEPTIONS BY PROFESSIONALS

Many of the damaging role perceptions outlined above can be clearly seen to be sustained by professional opinion or action. Professionals coined the term "subnormal"; professionals led the eugenics movement; professionals gave evidence at Dr. Leonard Arthur's trial; professionals are responsible for the imagery surrounding fund-raising by voluntary organizations; professionals perpetuate institutional provision (latterly in the form of the 24-place local authority hostel, which still severely isolates handicapped people and overloads particular communities with handicapped people); professionals create or condone damaging imagery in the environments of handicapped people; professionals often refer to and treat mentally handicapped adults as children.

Only a few years ago, a textbook of psychiatry was published in Britain, written by two prominent teachers of psychiatry, one of whom had taught for many years at a leading London teaching hospital. In a chapter on mental handicap, a number of passages strongly reinforced a "menace" perception of mentally handicapped people: for example, it was stated that some mentally handicapped people may commit "murder, rape or arson with as little concern for or appreciation of the nature of their actions as they show towards minor delinquencies." (Stafford-Clark and Smith, 1978). After protest from other professionals, from parents and from voluntary organizations and pressure groups, the authors and publishers agreed to amend the offending passage in a subsequent reprint of the book (Stafford-Clark and Smith, 1979).

It can be seen from these few examples that the implications of a sociological analysis for change in the attitudes or behavior of professionals are at least as great as those for change in the attitudes or behavior of the general public.

HANDICAPPING EXPERIENCES RESULTING FROM DAMAGING SOCIAL ROLE PERCEPTIONS

The existence of unhelpful social role perceptions is highly likely to lead to the embarkation of the handicapped person on a career of devaluation, consisting of a series of unpleasant or handicapping experiences. These may include:

- rejection from family, community, school or work;
- physical segregation away from the mainstream of society (see the concept of "social death" in Miller and Gwynne, 1972)
- spending one's whole day, week, year, lifetime in the company only of others who are devalued;
- having no social roots or place one can identify as one's home community;
- having few or no stable or long-term relationships with others, especially with valued others;
- physical or emotional insecurity;
- lack of freedom or control over one's own affairs;
- enforced material poverty;
- lack of experience and the opportunity for experience;
- attribution of additional negative characteristics which one has not actually got, by association (for example in Stafford-Clark and Smith, 1978, referred to above);
- being labelled, dressed, addressed or otherwise "marked" in devaluing ways;
- being ill-treated or hurt;
- being aware of being a burden or sadness to others, especially to loved ones;
- and having one's whole life wasted, through all opportunites for constructive social contribution being removed.

NORMALIZATION AS A RESPONSE

Normalization, as developed by Wolfensberger (1972), is a response to this sociological analysis of the problems faced by handicapped people. It is a set of principles constituting an ideology fo philosophy designed to guide the actions of professionals, parents, planners, politicians, researchers and the general public in their attempts to interact with and assist handicapped or disadvantaged people.

Any simple definition of normalization is likely to be misleading, since it is a complex and far-reaching concept. However, a succinct statement of what normalization is about, based on Wolfensberger's own definition (which has itself evolved over the years), is given by O'Brien and Tyen (1981):

> "The use of means which are valued in our society in order to develop and support personal behaviour, experiences and characteristics which are likewise valued."

It can be seen that normalization is concerned with both the means by which we try to help handicapped people, and the goals we have in doing so. We can decide what is valued in our society in a simple way by asking ourselves what we value; this is a salutary test of the quality of much of what we offer to handicapped people. In some circumstances - for example in using PASS, the system of service evaluation based on normalization (see below) - a more sophisticated test of what is valued is required, involving a more general appreciation of the cultural values of the society in which a service operates.

An important aspect of normalization is its concern, not just with the direct effects on handicapped people of service structures and content, but with the way in which handicapped people are interpreted or portrayed to the outside by those services. Normalization seeks the remediation of the problems of handicapped people through an increase in their public status. A key question can thus be asked of services for handicapped people and the actions of professionals, planners, politicians and others who purport to help them: do they interpret or portray handicapped people in a way that is likely to engender high or low public status for those people?

One of the best ways to reach an appreciation of the practical implications of normalization is to study the system of evaluating services, based on the principles of normalization, devised by Wolfensberger and Glenn (1975) and called Program Analysis of Service Systems (PASS). In order to give a flavour of some of the important issues that normalization requires us to be sensitive to, I will discuss briefly a few of the fifty individual ratings or areas of evaluation that are included in PASS. These can be described in the context of two key themes: integration, and the development model.

NORMALIZATION AND INTEGRATION

Integration of handicapped people into the mainstream of society is a central principle of normalization. Or rather, the principle is that handicapped people should not be removed from the social main-

stream in the first place. All handicapped people are born into ordinary communities, and services should enable people to remain as contributing members of those communities rather than removing them to segregated settings. Lip-service is often paid to the idea of integration or "community care", but normalization makes us sensitive to a number of issues that are commonly ignored in the planning of so-called community services.

In normalization, integration is seen as the establishment of good relationships between handicapped people and ordinary members of the community. The possibility of achieving this is severely reduced if particular neighborhoods or communities are "overloaded" with large numbers of handicapped people, if there is imagery associated with the handicapped people that is likely to put others off making contact, or if no effective help is available to enable handicapped people to participate in activities or situations together with ordinary non-handicapped people in local community settings. These factors are covered by the following three ratings in PASS:

Congregation, and Assimilation Potential

How do we decide if a particular neighborhood or community is likely to be overloaded by handicapped people? Or to put the question more positively, how do we decide what is an acceptable number of handicapped people to serve in a particular locality, given the aim of fostering good individual relationships with non-handicapped community members? This rating prompts us to consider four main issues. Firstly, above a certain size a particular service is likely to provide increasingly for people's needs internally, rather than providing support for meeting the needs in open integrated settings: for example, the larger a place is, the less likely people are to eat out, or the more likely it is that leisure or recreational pursuits will take place inside in a single segregated group rather than outside in diverse integrated groups. Secondly, the larger the numbers of handicapped people on one site, the more the ordinary person is likely to be put off making contact by the image created of oddity or "deviancy" when more than a certain number of handicapped people are seen together. Thirdly, the more handicapped people there are in a particular locality, the less opportunities are open to them as individuals to meet ordinary people through making use of local resources (shops, churches, recreation facilities, etc), without this process being interfered with by other handicapped or disadvantaged people trying to do the same. Fourthly, the higher the proportion of handicapped people to non-handicapped people in a neighborhood or community, the more restricted are the possibilities for fostering relationships, purely in numerical terms.

An example of recent planning which completely ignores the issue of congregation and assimilation potential is the establishment of

the Slade Hospital unit for severely mentally handicapped people, situated in the Cowley district of the city of Oxford in England. Within a few streets of this unit there were already functioning, an adult training centre for mentally handicapped people, two hostels for mentally handicapped adults, and a large home for elderly people. With the opening of the Slade unit the area has become even more of a "ghetto" for handicapped people, and opportunities for social integration have been reduced for all the handicapped people in the area.

Deviancy Image Juxtaposition

Images associated with the handicapped person are an important part of the interpretation of the person to others, as well as constituting part of the person's own daily experience. Images can put people off making contact with the person, by fostering the unhelpful social role perceptions outlined earlier in this paper. The powerful role of (often subconscious) imagery is well appreciated by the advertising industry but often completely unappreciated by those involved in service provision to handicapped people. Monkey posters, danger notices, high fences, symbols of pathos, clown images, childish decor, sickness images of white coats or "hospital" notices, siting next to rubbish dumps, prisons or cemeteries - all these things are frequently found, and they accumulate to create in many instances a disastrous overall effect that is highly likely to reduce good social contact between clients and the general public.

Socially Integrative Social Activities

A service structure or setting can create many opportunties for social contact, but those opportunities will remain wasted unless the service content includes active help to enable handicapped people to take part in social activities that involve social integration. Extensive social integration does not necessarily take place automatically once physical integration is achieved (see, for example, Malin, 1982). Handicapped people require help to participate in integrative situations - in their homes, at school or college, at work, in leisure and recreation, on public transport, on holiday, in church, in shops, in doctors' and dentists' surgeries, etc. They also need help to form good social relationships once they are in integrative situations, and indeed non-handicapped people also need help to achieve good social relationships with handicapped people (Williams, 1974; 1975; 1979; Williams And Geuntlett, 1975). A common failing of so-called "community care" is to place people in settings with some potential for integration, but to fail to take active steps to capitalize on that potential by helping people to form good relationships in socially integrative activities.

NORMALIZATION AND THE DEVELOPMENT MODEL

The psychological or educational framework for analysis of the problems of handicapped people has identified major needs and potential in the area of improving skills and abilities, and much of the clinical work of psychologists in mental handicap during recent years has been to devise ways of assessing the skills of handicapped people and to work with direct care staff on effective teaching methods. This is a very important need that is fully in accord with normalization principles, but normalization makes us sensitive to additional issues. The goals of normalization are not just concerned with the behaviors of skills of the handicapped person, but are concerned with achieving valued characteristics and experiences for the person that will enhance self-image and public status. To illustrate some of the implications of normalization in this area of development of valued characteristics and experiences, as well as valued behaviors, I will consider two relevant concepts in PASS:

Age-Appropriateness

In terms of our own values, one of the most demeaning things that can happen to us is to be treated like a child. Although most of us enjoy occasionally behaving like a child, we would find it very damaging to our self-image and public status to be always regarded as child-like. We value very highly our adult status and the responsibilities, opportunities and rewards of aduldhood.

Mentally handicapped adults, on the other hand, are often surrounded by images of childhood, and the expectations of others are very strongly that they will behave as children and should be treated as children. This can be reflected in environmental design and furnishings; in clothing, hairstyles and other aspects of personal appearance; in daily routines, in the nature of activities; in labels and forms of address; in possessions; in autonomy and rights; and in emotional and sexual relationships. (Each of these has a separate rating in PASS).

Normalization requires us to look for ways of sensitively improving the self-image and public status of handicapped people through encouraging characteristics and experiences that are appropriate to actual chronological age, rather than to any supposed "mental age". This is an area of great potential challenge, and one in which psychologists can play a major role - once agreement on the goal is achieved. Examples can include such things as the environments within training centers becoming more like that of a college or factory than a nursery school; people being sensitively discouraged from carrying dolls about in public or wearing children's badges on their clothes; searching for adult-like materials for teaching people skills like reading and writing, counselling and carefully helping

people to achieve adult relationships with others; extending the working or learning day so that it is more appropriate in length to that of valued adults in our society; and so on.

Intensity of Relevant Programing

This rating in PASS raises issues in relation to all three elements: "intensity", "relevance" and "program". A program, in the context of normalization, is a firm committment by a service or professional to achieve specific goals within a particular time. Usually this will take the form of a written "Individual Program Plan" (see, for example, Blunden, 1980).

Such a program should be carried out with a valued degree of intensity, in terms of appropriate devotion of time and energy, use of up-to-date technology, skilled personnel, efficient use of time, and sufficient resources or equipment and people. Very many programs for mentally handicapped people are carried out at an extremely low level of intensity - part of the superimposed handicapping experience for many devalued people of having their life wasted. High intensity is especially important for handicapped children if they are to be adequately prepared for adulthood; yet the very low intensity of much work with mentally handicapped children has been documented by many writers (for example Norrie, 1961; Oswin, 1971; 1978).

The issue of relevance is an important one for clinical psychologists, as it is for all service providers. In normalization, relevant means meeting major needs of an individual for establishment or maintenance of valued behaviors, characteristics or experiences. We therefore need to go beyond the simple model of identifying needs through a self-help skills checklist, as is quite prevalent nowadays. Gold (1973; 1975; 1976 - see also O'Brien and Tyen, 1981, 1981), for example, stresses the need to teach mentally handicapped people what he calls "genuine competence" - i.e. skills that are genuinely valued in their potential for constructive social or economic contribution, skills that not everybody has and that everyone would require training to learn. The widespread abandonment of work-oriented training in adult training centers in Britain at present needs to be reviewed in the light of this concept (see Williams, 1967; Bellamy, Horner and Inman, 1979; Whelan and Speake, 1981). Additionally, Individual Program Plans need to be based on a comprehensive review of a person's needs in all areas of their experience, not just in the areas of skills and behavior. Plans might include as vitally important spheres of action: help to enable the person to achieve friendships; help with age-appropriate personal appearance; encouragement to have more appropriate possessions; an extension of integrative activities in community settings; more flexible transport arrangements; a higher personal income; a genuine home in the community; and so on. Many such plans may concentrate the action not on direct teaching of the

individual handicapped person, but on work to establish new services or opportunities for the person - such as citizen advocacy (Wolfensberger, 1977; Wolfensberger and Zauha, 1973); or self-advocacy (Williams and Shoultz, 1982); or normalized residential provision such as is described by Derek Thomas in his contribution to this book.

Virtually no mentally handicapped people in Britain today - and few in America - receive a satisfactory intensity of relevant programing. It is particularly salutary for clinical psychologist to realise that the bulk of the work he or she is involved in is unsystematic programing of very low intensity that may not be relevant to the handicapped person's real needs as seen from the perspective of normalization. In this, of course, psychologists are not alone.

CONCLUSION

Normalization is a complex, far-reaching and demanding set of principles constituting an ideology. As such, its pursuit depends on beliefs and values rather than on the accumulation of scientific evidence of efficacy. Should this statement seem rather strange, it can be pointed out that the perpetuation of institutional provision also rests on beliefs and values and is in fact in direct contradiction to massive accumulated evidence of its non-efficacy (Dydwad, 1964; Tizard, 1964; Morris, 1969; King, 1971; Blatt and Kaplan, 1974; Jones, 1975; Kushlick, 1975; Wolfensberger, 1975; Oswin, 1978; Tyne, 1978; and many others).

Implementation of normalization requires firstly an accurate knowledge of what normalization is and is not, and of its high demands as an ideology; and secondly an active decision, based on agreed beliefs and values, to pursue the principles of normalization. Once these requirements have been achieved, then the problems of implementing normalization are amenable to scientific study and to the careful recording of clinical and administrative experience (see, for example, Thomas, Kendall and Firth, 1978; Perske, 1979; Flynn and Nitsch, 1980; Malin, 1982; Menolascino and Swanson, 1982). This is further demonstrated by the other papers in this section of this book.

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SEXUALITY AND MENTAL HANDICAP: A REVIEW

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INTRODUCTION

The area of sexuality and mental handicap is wide in scope, controversial in content and has recently become the focus of increasing interest with a corresponding growth in the number of books published on this topic (see for example Craft and Craft, 1979; 1982; 1983; Kempton, 1975; Monat, 1982; Stewart, 1979). The scope of this chapter will be limited to a selective review of literature on four main issues which have emerged; attitudes, knowledge, teaching content and teaching methods. These issues will be discussed in relation to mentally handicapped people, their parents and staff who work with them. Detailed coverage is given elsewhere to the legal aspects (Craft and Craft, 1982; Harvey, 1983; MIND, 1982), marriage and parenthood (Craft and Craft, 1979; Mattinson, 1975), contraception (MacLean, 1983) and reproduction (Salerno et al., 1975).

Two distinctive social trends may have contributed to the increasing interest in sexuality and mental handicap. The first is the changing attitudes to sexuality that have taken place, which have led to more discussion about sexuality in general, not only in relation to mentally handicapped people. The second trend is the increased concern with the rights of mentally handicapped people exemplified by the principles of normalization (Wolfensberger, 1972). This concern has also involved increasing deinstitutionalization of mentally handicapped people with a corresponding growth in community services. The move to community provision has emphasized the need for independent living skills including socially acceptable behavior. Increasingly, professionals are seeing sex education as part of socialization and interpersonal skills training to enhance the acceptance of mentally handicapped people in the community. Furthermore, behavior

such as a demonstrative show of affection which may have been endorsed in some environments may be less acceptable in the community.

The need for advice and counselling for mentally handicapped people in sexual behavior was identified in the Court report (Fit for the future, 1976) and the Jay report (DHSS, 1979). The Warnock report (DES, 1978) stated that this area is badly handled and recommended research on provision and staff training. Suggested guidelines for hospitals were given by the National Development Group (NDG, 1978) which are commented on the uncertainties of staff and parents in relation to Adult Training Centers (NDG, 1977) and included sexual couselling in their Checklist of Standards (NDG, 1980). Thus, the needs have received formal recognition but implementation of the services to meet them is still lagging behind.

ATTITUDES TOWARDS SEXUALITY AND MENTAL HANDICAP

Attitudes of Mentally Handicapped People

There is a paucity of information on the sexual attitudes of mentally handicapped people themselves, as distinct from the attitudes of others to their sexuality. Attitude scales may suffer from ambiguities, leading to problems of validity, which are intensified when the scale is on an emotive topic such as sex. These difficulties are likely to be increased when attempts are made to apply the scales to mentally handicapped people who may have limited language skill. For these reasons, procedures have been developed which rely less on verbal skills. Wish et al. (1980) standardized the Sociosexual knowledge and Attitudes Test (SSKAT) on mentally handicapped adults, a procedure involving mainly visual and verbal comprehension and demanding pointing behavior. Previous work by Edmonson and Wish (1975), which had relied more on verbal responses, suggested that institutionalized males, who had been selected for transfer to community placements, were rather prohibitive in their sexual attitudes. Watson and Rogers (1980) similarly found that the sexual attitudes of ESNM children were much more conservative than their peers at comprehensive schools with the latter, the authors suggest, being more reflective of the prevailing attitudes of society as a whole. No significant differences were found between the sexual attitudes of instituionalized and non-institutionalized retarded adolescents (Hall and Morris, 1976).

Watson and Rogers (1980) made significant progress in overcoming the problems of rapport and intellectual disability inherent in assessing the sexual attitudes of mentally handicapped people. They developed the Sex Attitudes and Facts for the Educationally Retarded (SAFER) instrument which assesses sexual attitudes and knowledge through a game involving the posting of cards depicting various members of the family and friends. This instrument has also been

used with more severely mentally handicapped people (Watson, private communication). In summary, while there has been little research on the sexual attitudes of mentally handicapped people, some attempts are being made to develop suitable procedures for their measurement.

Attitudes of Parents to Sexuality and Mental Handicap

In this area, as in other areas of mental handicap, more is written about parents, than by them. Hence, Fairbrother's (1983) contribution is greatly welcomed. She suggests that parents must change their attitudes in order to ensure mentally handicapped people's sexual needs are recognized and met. There are still some parents who view their mentally handicapped offspring as lifelong children even when they are thirty or forty. Brantlinger (1983) noted that parents had more conservative attitudes than the staff who work with mentally handicapped people. Parents of non-handicapped people often share similar attitudes to those of handicapped people and, as Farrell (1978) found, the majority feel they should tell their children about sex but only the minority actually do so. Watson and Rogers (1980) identified more parents of ESNM pupils who expressed concern over their childrens' lack of sexual knowledge than they did parents of comprehensive school pupils. Nearly all the parents in Farrell's (1978) sample wanted their children to have sex education at school, whereas 88 per cent of the parents of ESN pupils (Watson and Rogers, 1980) wanted their children to have sex education at school or at home and school together. Hence, while parents of handicapped pupils recognized their childrens' greater lack of knowledge they were more likely to view themselves as being involved in their education.

The question of parental permission is frequently raised in the area of sex education. While the staff in hospitals and residential establishments can be considered acting in 'loco parentis', those in Social Education Centers and schools are often concerned to obtain parental approval for any sex education undertaken. More ESNM schools than comprehensive schools sought parental permission (Watson and Rogers, 1980) but this difference may reflect greater degrees of parental consultation in all areas of the curriculum in special schools. As Watson and Rogers point out, isolating sex edcuation is likely to emphasize its difference and potential for controversy which is a situation to be avoided. Differences have been identified between the issues of greatest concern to parents. The teachers in ESNM schools in Watson and Rogers (1980) study were most concerned with menstruation and birth whereas the parents were more concerned with contraception. Various possible explanations could be suggested for these differences but all would require empirical investigation to substantiate them. It will suffice here to suggest that those embarking on sex education training workshops aimed at both parents and professionals should be sensitive to the possible differences in interests.

Attitudes of Staff to Sexuality and Mental Handicap

Like parents, many staff working with mentally handicapped people feel ill-equipped to deal with sex education as they themselves are unlikely to have ever received such education. Furthermore, there are staff who will resist any program of sex education as they feel, as do some parents, that 'what they don't know, they don't need to know'. As will be discussed later, there is no evidence to suggest that withholding information deters sexual activity (Kempton and Foreman, 1976). Mental handicap is still linked with sexual promiscuity, not only by the public (as exemplified by the resistance to proposed residential establishments), but by staff as well. In a study of the attitudes of hospital nurses, Jones (1975) reported that nearly half the nurses agreed with a statement linking promiscuity with mental subnormality. Even when not linked directly with promiscuity, 27 per cent of nursing staff and 19 per cent of hostel staff were noted, in the Jay report (DHSS, 1979), to consider that mentally handicapped adults should be discouraged from developing sexual relationships. More extreme views were expressed in residential facilities studied by Mitchell et al. (1978) where 31 per cent of those questioned felt that no sexual behavior was acceptable for retarded people. Interestingly, the Jay report stated that nurses in the female and mixed wards, which each constituted about a third of the total number of wards considered, were more worried about sexual relationships amongst the residents than those in the male wards.

The question then arises of whether staff attitudes vary according to the type of sexual behavior considered. It appears that most staff in residential establishments agree that masturbation in private should be permitted (Mulhern, 1975; Saunders, 1979) but staff from a variety of settings are less inclined to consider the possibility of teaching mentally handicapped people to masturbate (Sebba, 1981b). This may be due to the ethical difficulties raised which are discussed further by Clifford and Sharpe (1983) and Monat (1982). Other forms of sexual behavior meet with less approval from staff; only 55 per cent of Mulhern's sample and 70 per cent of Saunder's sample considered that petting (defined as hands on genitals) in private should be permitted. Only 41 per cent in the Mulhern study and 72 per cent in Saunder's study thought heterosexual intercourse in private should be permitted. The staff's attitude to homosexual behavior was far more restrictive; only 33 per cent in the Mulhern sample and 32 per cent of the Saunder's sample stated that homosexual behavior in private should be permitted and no differences were expressed in the Mulhern study between female or male homosexuality. Mitchell et al. (1978) also found homosexual behavior to be the least acceptable to staff. A self-selected multidisciplinary group of staff and parents attending a one-day workshop expressed greater tolerance towards homosexual behavior (Sebba, 1981a). All staff appear to express more acceptance of activities taking place in private than in public (Mitchell et al., 1978; Mulhern, 1975;

Saunders, 1979) which raises the important issue of privacy. Residential establishments often lack privacy and recommendations have been made (NGD, 1980) to try and improve privacy in the facilities offered. However, the buildings alone cannot change the opportunities for privacy and staff attitudes must ensure that for example, staff respect the individual client's privacy by knocking on doors.

Are there significant differences between the attitudes of the various professionals working with mentally handicapped people? Studies using self-selected samples might be expected to find more 'liberal' attitudes than those adopting representative sampling techniques. Brantlinger (1983) found that group home staff were more liberal than nursing staff, but that other characteristics such as age, sex education and religion were also important determinants of differences. There is clearly much disagreement between staff about the acceptability of various types of sexual behavior for mentally handicapped people. It is widely accepted that consistency of staff responses is vital in the success of educational programs for mentally handicapped people, especially in programs concerned with reducing problem behaviors. Many of the main concerns raised by staff in the area of sexuality involve problem behaviors such as masturbation in inappropriate places (see for example Mitchell et al., 1978). Hence, it would appear vital that staff respond in a consistent manner to enable the individual to receive unambiguous messages about his or her behavior.

The search for consensus among staff has led may to suggest that formal guidelines or policies are required in any setting to assist staff in their decisions about how to react to sexual behavior that does occur (Brantlinger, 1983; Harvey, 1983; Mulhern, 1975). Mulhern (1975) reported that only 23 per cent of centers had any guidelines and Saunders (1979) found that, although 63 per cent of staff worked in facilities which had set policies, these staff contradicted one another about the guidelines given in these policies. It is probable that a written policy covering all eventualities in this area would be very difficult to produce but as Harvey (1983) suggests, it may be essential to protect staff. The fear of scandal which might involve the media may have led the manager of a center in the BBC Film 'Donal and Sally' to comment that the public expected higher moral standards in mentally handicapped people than they do in themselves.

While there is such a range of staff attitudes and considerable unacceptance of sexual behavior for mentally handicapped people, with little guidance in the form of written policies to protect staff, resistance to sex education programs must be expected. For this reason, Mitchell et al. (1978) have suggested that programs should be 'conservative' in overall tone. Meanwhile, staff attitudes may or may not change but it is unlikely, and probably not desirable, to foresee a time when everyone holds an identical view.

MENTALLY HANDICAPPED PEOPLES' KNOWLEDGE OF SEXUALITY

Similar difficulties are involved in the measurement of sexual knowledge of mentally handicapped people as were identified in relation to their attitudes. Many procedures rely on verbal comprehension, which may be lacking, and expressive language which is likely to be even more limited. Various checklists (for example Bender et al., 1976; Whelan and Speake, 1979) exist, which have items on the sexual knowledge and behavior of clients, for completion by staff and imaginative attempts have been made to develop testing materials that rely less on verbal skills (Johnson, 1981; Watson and Rogers, 1980; Wish et al., 1980).

Whenever procedure is used to collect information on the sexual knowledge of mentally handicapped people, the results seem to indicate that their knowledge is seriously lacking and confused (Edmonson and Wish, 1975; Edmonson et al., 1979; Gillies and McEwen, 1981; Hall and Morris, 1976; Johnson, 1981; Watson and Rogers, 1980). Mentally handicapped people were found to be particularly lacking in knowledge of birth control and venereal disease (Edmonson et al., 1979; Gillies and McEwen, 1981) and also menstruation, abortion and homosexuality, while paradoxically they display greater knowledge of sexual intercourse (Gillies and McEwen, 1981). Knowledge of birth control was also found to be lacking in 'normal' adolescents (Gillies and McEwen, 1981) so it is important not to attribute this ignorance exclusively to mentally handicapped people.

The sexual knowledge of mentally handicapped people is further influenced by individual characteristics. Edmonson and Wish (1975) found that sexual knowledge correlated significantly with verbal IQs and the areas of language, socialization and responsibility on the Adaptive Behavior Scale. However, a more recent study by Edmonson et al. (1979) concluded that IQ was not a limitation on sexual knowledge, sex and place of residence being more important factors. Relatively superior knowledge of 'Dating' and 'Intercourse' and lower scores on 'Intimacy' were found among institutionalized women which the authors suggest may derive from their pre-placement experiences. Institutionalized adolescents demonstrated less knowledge than those living at home and with increasing months in the institution, the amount of knowledge appears to decrease, although those in mixed sex facilities tended to have higher knowledge scores than those in same sex housing (Hall and Morris, 1976).

Increasing the Sexual Knowledge of Mentally Handicapped People

Before considering the ways in which mentally handicapped people may be educated on sexual matters, it is necessary to provide justification for doing so. As noted, there is likely to be considerable resistance from some staff to the implementation of sex education

programs, so clear reasons may need to be provided. It appears that mentally handicapped people are confused and ill-informed about sexuality, perhaps because, as Edmonson and Wish (1975) point out, it is difficult for them to conceptualise things which are not visible and most appropriate sexual behavior may not be visible. Hence they may acquire information from jokes, the media or magazines, although reading as such is likely to be limited. The opportunities available to the rest of the population to become informed are simply not accessible to mentally handicapped people. Structured teaching with consistent approaches are required in this area as in any other area of their learning.

It may be considered that informing mentally handicapped people about sexuality will give them ideas about how to behave and the general assumption is that this behavior will be inappropriate. As previously mentioned, there is no evidence that withholding information deters sexual activity (Kempton and Foreman, 1976) and it may be too late to provide information once the behavior has occurred and has resulted in an unwanted pregnancy, venereal disease or severe emotional disturbance. It might be argued that prevention is better than crisis intervention and that setting goals for appropriate behavior should be the aim.

Ignorance on the part of mentally handicapped people may have contributed to their higher incidence of minor sexual offences (Robertson, 1981). Acts of indecent exposure or assault may be caused by ignorance of appropriate behavior rather than by any 'perversion' per se. Furthermore, it has been suggested (Kempton and Foreman, 1976) that mentally handicapped people are more likely to confess under pressure and less likely to have their complaints heard. These issues have been highlighted by the advocacy movement, but this movement cannot replace structured teaching of appropriate sexual behavior. Sex education for mentally handicapped people therefore endeavours to help them become socially responsible people and protect them from exploitation.

TEACHING MENTALLY HANDICAPPED PEOPLE ABOUT SEXUALITY

The main concerns regarding the teaching of sexuality to mentally handicapped people are what actually to teach and how to portray the information so that it can be understood. Thus, this section is divided into teaching content and teaching methods.

Teaching Content

One major issue which arises in decisions about what to teach is whether or not sex education is a part of other areas of the program and what label it is given. For political reasons, it sometimes

appears in the program disguised under other names such as health education, social and interpersonal relationships, social skills training and so on. However, it may be linked with other areas of the program in order to convey the principle that it is part of other living skills and should be considered in relation to social, moral and other aspects of behavior. Watson and Rogers (1980) categorized the approaches of the ESNM schools they studied in three ways. The first approach they called the Moral Approach which involved guidance to pupils on what they should not do rather than any positive information which might stimulate them. Secondly, the Relationship Approach was identified in which schools taught ESNM pupils about family life, parenthood and relationships but did not give 'hard' facts on reproduction, contraception or venereal disease. The final approach adopted was labelled the Forthcoming Approach and covered all areas of sex education. Interestingly, schools adopting this latter approach taught sex education on its own and timetabled it under the label 'sex education'.

Topics included under sex education vary but a typical selection might be those covered by the Kempton slides (Kempton, 1976) which are parts of the body, puberty, social behavior, reproduction, birth control, venereal disease and sexual health, marriage and parentage. Other examples of programs are that produced by the Mill Lane Adult Training Center in England (Mill Lane ATC, 1980); Bender, Bender and Valletuti's (1976) curriculum which states clear objectives and suggested activities; and Fischer, Krajicek and Borthnick's (1973) guide for parents, teachers and professionals which provides detailed teaching suggestions, although the areas covered are more limited. Monat (1982) gives extensive details on topics to be covered in a program for mentally handicapped people as does Kempton (1975). McNaughton (1983) has adapted health education materials for ESNm pupils. A full review of the curricula and programs available is provided by Craft (1982) who also lists distributors.

Teaching Methods

As previously noted, a justification for providing sex education for mentally handicapped people is that they find it difficult to grasp concepts that are not either concrete or visible. Hence, teaching methods must be selected which provide clear, unambiguous and frank communication. This need can be met by the use of slides, drawings, books, photographs films or videotypes. Detailed descriptions of the resources available are given in Craft (1982) and Craft et al. (1983). The most useful materials are those which can be used selectively to enable teaching programs to be individualised.

Important issues arising in relation to teaching methods concern how many clients should be taught together (or whether all teaching should be on an individual basis), who should undertake the teaching

and should the sexes be mixed. The type of institution or setting involved will dictate the answers to some of these questions. Thus, in a large institution, small groups may be more realistic than individual teaching but in the parental home, a one-to-one teaching situation is likely to be the only possibility. Large groups may be unrealistic because of the likely range of previous knowledge and experience of the clients.

Kempton (1978) found that many professionals were represented amongst those conducting sex education including nurses, teachers, social workers, occupational therapists and psychologists. Bringing in an 'outside expert' to do the teaching may cause problems as the outsider will not be familiar with the clients and will be unable to capitalize on conversations or situations which arise outside the formal teaching time. It is sometimes considered appropriate to mix the sexes in teaching situations to enable comparisons of roles to take place in the group. Likewise, it is sometimes suggested that a female and male staff member teach the clients together. It has also been suggested that more than one teacher be involved in each session to reduce the likelihood of problems arising should accusations of misconduct be made.

Evaluating the Effectiveness of Teaching Programs

The evaluation of the effectiveness of sex education programs cannot be undertaken without prior consideration of the goals of sex education. The goals may be expressed positively in terms of mentally handicapped people showing appropriate sexual behavior or negatively in terms of a reduction in inappropriate sexual behavior. A problem which arises in the positive approach is that it aims to teach mentally handicapped people that appropriate sexual behavior should take place in private. Thus, if the teaching is effective, the results are likely to be unobservable.

Watson and Rogers (1980) noted that those ESNM pupils who indicated that teachers had been responsible for their sex education scored higher on the knowledge scale than those who indicated family or friends. This suggest some support for the value of formal programs. Attempts have been made to test sexual knowledge before and after a sex education program. Penny and Chataway (1982) found that sexual knowledge increased on post-test and continued to increase after completion of the program. They suggest that the small group teaching situation may have facilitated information exchange. Johnson (1981) used the Sexuality Development Index he developed to compare the efficacy of two methods of sexuality training. Subjects were pre- and post-tested on sexual knowledge using videotapes to portray test items in a concrete form, and it was found that Group Sexuality Counselling was a more effective teaching method than traditional sex education. Johnson argued that the Group Counselling

approach, which was more client-focused and utilized group interaction and role-playing, improved the clients' self concepts and provided them with practical coping strategies rather than just basic knowledge.

These attempts to measure changes in clients' knowledge and behavior are welcomed. However, where this is impossible, some indication of the effectiveness of sex education may be sought from teachers reports which is a simpler, although probably less valid, approach. Kempton (1978) found that teachers reported positive effects of a sex education program on the students' behavior, with greater appropriate expression of sexual feelings and desires, both verbally and in action, and many teachers noted that more communication about sex took place. When the negative approach to the goals of sex education is considered, it has been shown that behavioral methods can be successfully employed to reduce problem sexual behavior (Polvinale and Lutker, 1980). However, the approaches used do not differ from behavioral methods used to reduce any problem behavior. This approach therefore raises the same ethical problems as behavior modification in other areas of mental handicap work.

STAFF AND PARENT TRAINING IN SEXUALITY AND MENTAL HANDICAP

Various agencies provide training for staff and parents on sexuality and mental handicap. These programs vary in content and approach but generally include a balance of the four areas covered in this chapter, that is, attitudes, knowledge, teaching content and teaching methods. Detailed suggestions of content and methods for staff training programs can be found in Kempton (1983) and Kempton and Foreman (1976).

The evaluation of the effectiveness of staff training programs raises similar problems to those raised by the evaluation of teaching sex education to clients. If staff training is effective in terms of enabling staff to change the clients' behavior the results may be unobservable. Brantlinger (1983) found that sexuality training was effective in producing attitude change, staff and parents becoming more 'liberal' on post-tests. However, as the author indicated, it is not clear whether these changes in attitudes actually made a difference subsequently to the staff and parents' interactions with mentally handicapped people. Participants on one-day workshops do not appear to change their attitudes or behavior (Sebba, 1981b; Shaddock, 1979) suggesting that workshops need to be longer to be effective.

FUTURE TRENDS

Social attitudes to sexuality and mental handicap may be considered to have reached the 'tolerance' phase of Kempton's elimin-

ation - tolerance - cultivation scale (cited in Sebba, 1981a). hence, there is still much progress to be made in assisting mentally handicapped people exercise their rights to fulfil their sexual and emotional needs. The first step would seem to be to provide more practical training for parents and staff, in order to encourage positive attitudes and inspire confidence. It is neither realistic nor desirable to expect to reach a consensus on sexual attitudes and staff who do not wish to become sex educators should not be put under pressure to do so. However, sex education could be integrated into initial and in-service courses for many professional groups rather than being an elective option or covered in a few hours as in current teaching training programs (May, 1980). Furthermore, attempts should be made to evaluate in-service courses in terms of their effectiveness in changing both staff and clients' behavior and consideration should be given to which course activities are most effective in producing such change.

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THE IMPLICATIONS OF THE MENTAL HEALTH ACT 1983

FOR THE TREATMENT OF MENTALLY HANDICAPPED PEOPLE

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INTRODUCTION

The Mental Health Act 1983 came into force in September 1983. The new legislation had its roots in the Royal Commission on Mentally Abnormal Offenders (The Butler Report) and in Larry Gostin's "A Human Condition" Volume 1 distributed by MIND.

In 1976 the Department of Health and Social Security published a discussion document and this was followed in 1978 by a White Paper. The Bill was finally introduced into the House of Lords in 1981. Eight years from inception to enactment shows why this is likely to be the last major piece of mental health legislation this century. In writing this paper I have obviously been selective in order to concentrate on the issue of mental handicap.

MENTAL DISORDER

The Act essentially relates to compulsorily detained patients who represent less than ten per cent of the total of patients in hospital. There has been much debate as to whether the unhappy linking of mental illness and mental handicap in the 1959 Mental Health Act should remain. The majority of evidence received by the government was that there should be a clear division. The bonding in statute perpetuated the misunderstandings and misconceptions widely held about the two. Many people do not even realize that there is a difference.

Footnote - The views expressed in this chapter are those of the Author and do not necessarily reflect the view of the Mental Health Act Commission.

The Bill initially laid before Parliament altered the terminology of "subnormality" to "handicap". As a result of 'behind the scenes' negotiations a new terminology was conceived - "mental impairment". It had not been the subject of previous debate and took even informed commentators by surprise.

"Mental impairment" is defined as:

> "a state of arrested or incomplete development of mind (not amounting to severe mental impairment) which includes significant impairment of intelligence and social functioning and is associated with abnormally aggressive or seriously irresponsible conduct."

"Severe Mental Impairment" is defined as:

> "a state of arrested or incomplete development of mind which includes severe impairment of intelligence and social functioning and is associated with abnorally aggressive or seriously irresponsible conduct."

We now have a combination of the old definitions of subnormality with that of psychopathy. Only mentally handicapped people who have psychopathic tendencies will now be caught within the compulsory long-term admission sections.

Whilst I would support a splitting of illness and handicap I believe we have an unhappy compromise. Even the new terminology is hardly endearing. What will happen when a non-dangerous persistent offender who is mentally handicapped is brought before the Magistrates Court? Will they be pleased by the increased likelihood that they will be sent to prison?

What will happen to those subnormal and severely subnormal patients who for most of their lives have been locked in top security mental hospitals? In their old age some have no desire to move. Indeed a move could be harmful to their health. However, as Special Hospitals cannot keep informal patients, will these people (who are not psychopathic) have to be turned out?

I will refer to the problems with Guardianship later.

COMPULSORY ADMISSION

Assessment (Section 2)

This order authorises compulsory detention for up to twenty-eight days. Instead of the previous 'observation' order it is now called as 'assessment' order.

Major changes here include the duties of social workers, the right to apply for a Mental Health Review Tribunal, and new provisions relating to consent to treatment. (I will deal with these later.)

Where a mentally handicapped person does not fulfill the new criteria of 'impairment', admission can still take place if they are suffering from "any other disorder or disability of mind".

If the application for admission is made by a nearest relative (as opposed to a social worker) a report on the patient's social circumstances must be produced by social services "as soon as practicable". This also applies to Section 3.

If the application is made by a social worker, his or her duties under the Act are strengthened:

> "Before making an application for the admission of a patient to a hospital an approved social worker shall interview the patient in a suitable manner and satisfy himself that detention in a hospital is in all the circumstances of the case the most appropriate way of providing the care and medical treatment of which the patient stands in need."

A Social Worker is also under a duty to inform the nearest relative that an application has been made and tell that person of the right of discharge.

People detained under this Section can apply to a Mental Health Review Tribunal within fourteen days. It is an important new right for people who are detained against their wishes for a significant length of time.

Assessment in Case of Emergency (Section 4)

This order allows a patient to be detained for up to 72 hours and unlike most other orders, need only be signed by one doctor. The previous abuse of this power was acknowledged by the Government in the Second Reading debate in the House of Commons:

> "The emergency provisions were used more than any other admission power. This was never intended."

Whereas under the old Act an application could be signed by any relative, now it must only be a person's nearest relative.

Patient Already in Hospital (Section 5)

Under the old Act the doctor in charge of an informal patient could detain them against their wishes for up to three days if it

appeared that an application ought to be made. It was not necessary for a mentally handicapped patient to fulfill the 'impairment' criteria.

The 1982 Act makes matters more flexible. The doctor in charge may nominate another doctor to sign on his or her behalf.

If a "nurse of a prescribed class" cannot get a doctor quickly enough, he or she can detain the patient for up to six hours "for their own health and safety or for the protection of others", if they are suffering from mental disorder. This should remove the unfortunate practice of some doctors leaving a supply of signed Section 30 forms with the name of the patient left blank.

Treatment (Section 3)

This is the long term detention order. Under the old Act it enabled a person suffering from subnormality or severe subnormality to be detained initially for one year, then another year and thereafter detention had to be renewed every two years.

Under the 1983 Act each of these periods are halved. Because of the stricter definitions (see above), many mentally handicapped people will fall outside this section. There are no alternative means of compelling the long term admission of a mentally handicapped person if they are not also psychopathic.

The new grounds for admission for a mentally handicapped person are:

"a) that he is suffering from severe mental impairment or mental impairment being a mental disorder of a nature or degree which makes it appropriate for him to receive medical treatment in hospital, and
b) in the case of mental impairment that such treatment is likely to alleviate or prevent a deterioration in his condition, and
c) that is necessary for the health or safety of the patient or for the protection of other persons that he should receive such treatment and it cannot be provided unless he is detained under this Section."

b) is particularly significant in that the concept of 'treatability' is a new one. Some reservations have been expressed to me, however, on the grounds that since neither mental handicap or psychopathy are 'treatable' how will this Section be interpreted?

It remains to be seen whether the Government's high expectation will be fulfilled:

> "These criteria for detention will ensure that no-one will be detained or will continue to be detained unless there is a genuine need."

But I wonder whether all those in genuine need will be able to get the treatment they need.

Another significant change was that from 'Mental Welfare Officers' to 'Approved Social Workers'. This is important and not just for those mentally handicapped people who are compulsorily detained. It will mean that more social workers will have a greater knowledge and understanding of mental health matters generally.

The new 'approval' comes into force in September 1985:

> "The Government attaches considerable importance to the new concept of approval of social workers. It wishes to ensure there is a steady supply of well trained social workers to undertake these duties."

A new power of 'automatic referral' to a Mental Health Review Tribunal has also been introduced. Once a patient has been detained for six months, if they have not applied themselves, their case is referred automatically. Thereafter a referral will occur every three years. (There are some minor exceptions to this.)

GUARDIANSHIP

The use of this power has declined steadily since 1959 and there are now very few applications made. Those that are made are usually for the mentally handicapped.

The provisions in the 1983 Act are that a mentally handicapped person who has attained sixteen can be received into guardianship if he or she is suffering from severe mental impairment or mental impairment and it is in the interests of the welfare of the patient. The guardian then assumes the powers that a parent of a child under the age of fourteen would have, limited to:

a) a power to require the patient to reside at a place specified, and/or
b) a power to require the patient to attend for medical treatment, occupation, education or training, and/or
c) a power to require access to the patient to be given to any registered medical prectitioner, mental welfare officer or other specified person

The duration and renewal of a guardianship order is as for Section 3.

A major reason for the infrequent use of guardianshop was its previously all-embracing powers. The provisions outlined above should give greater flexibility. However, the new definition of 'impairment' will exclude the vast majority of mentally handicapped people from these provisions. With the increasing care of mentally handicapped people in the community, a more imaginative use of guardianship might have done a great deal to avoid unnecessary hospitalisation. It could also have assisted local authorities where a handicapped person does not have a family. The great British art of compromise does not always lead to the happiest outcome.

MENTALLY ABNORMAL OFFENDERS

Hospital Orders (Section 37)

A hospital order can be made either by a Magistrate or Crown Court for a mentally handicapped person if the following criteria are satisfied:

a) The offence must be imprisonable;
b) The disorder must warrant detention in hospital;
c) The offender must be suffering from impairment or severe impairment;
d) In the case of mental impairment the treatment must be likely to alleviate or prevent a deterioration in the condition;
e) Two doctors, one of whom must be approved under Section 28 of the Mental Health Act 1959 must support the Order. Their written reports will suffice;
f) A hospital must agree to accept the patient.

The Court can also make a guardianship order if the offender is sixteen or over.

There has been a sad catalogue of cases in the past few years where Courts have wanted to send offenders to hospital rather than prison, but prison sentences have been passed because no receiving hospital could be found. There are a number of possible explanations. Hospitals tend to prefer the 'nice' ill rather than the 'not nice'. Also, psychiatry does little to counter the myth widely held by the public that if a person is mentally unwell then psychiatry holds all the answers.

In the final stages of the passage of the Act through Parliament, the Government moved an amendment whereby a Court could require a Regional Health Authority representive to provide information about hospitals in their area which might accept the offender. Some Regional Health Authority representatives may be in for a rough time telling a Judge that he or she cannot have their own way.

Hospital Orders With Restrictions (Section 37/41)

A Crown Court has the power to attach a 'restriction order' to a 'hospital order'. In addition to the requirements for a hospital order:

a) one of the doctors must give oral evidence, and
b) the restriction order must only be imposed if it is necessary to protect the public from serious harm.

A major change was forced upon the Government by the case of X v The United Kingdom before the European Court of Human Rights on the 5th November 1981. Under the old Act a patient under a restriction order could only be transferred or discharged by order of the Home Secretary. This contravened the right of a person to have a periodic right of access to a 'court' which can consider the continued justification for detention and, if necessary, discharge.

A Mental Health Review Tribunal now has the power to order the absolute or conditional discharge of restricted patients. The first right to apply is after the first six months of detention and thereafter annually.

Three new powers will be given to the criminal courts:

a) Remand to hospital for reports;
b) Interim hospital orders;
c) Remands to hospital for treatment

Remands to Hospital for Reports (Section 35)

A person can be remanded either by a Magistrates' Court or a Crown Court to a hospital rather than a prison for report on their mental state if:

a) medical evidence is given that they may be either impaired or severely impaired, and
b) it would be impractical to get a report if they were given bail, and
c) they can only be remanded for a maximum of twelve weeks.

Interim Hospital Orders (Section 38)

A Magistrates' Court or a Crown Court can make, in effect, a trial hospital order if two doctors report that a hospital order might be appropriate. This will have a maximum length of six months.

Remands to Hospital for Treatment (Section 36)

Only a Crown Court can make this order if two doctors inform the Court that the person is suffering from severe mental impairment and needs to be detained in hospital for treatment. The maximum period is twelve weeks.

These orders will enable mentally handicapped people whom the Court judge should be in custody to be detained in hospital pending the judicial process. It could enable the Court to adopt a more humanitarian approach, but only if they understand the provisions and the hospitals agree to co-operate.

The Act makes some amendment to the law relating to the transfer of offenders from prison to psychiatric hospital. I will not be dealing with these in this paper.

MENTAL HEALTH REVIEW TRIBUNALS

A Mental Health Review Tribunal comprises a Legal Chairman, a doctor and a layman. They have various powers and functions and are an independent body for those patients who are detained on orders of 28 days and longer.

A new set of Mental Health Review Tribunal rules came into force on September 30th 1983. They cover such matters as: method of making applications; procedure at hearings; disclosure of information, and regulations relating to patients detained for assessment. They replace the Mental Health Review Tribunal Rules 1960.

A Tribunal must discharge a person if satisfied that they are not mentally impaired or severely mentally impaired or it is not necessary for the health or safety of the patient or the protection of other people that they should receive such treatment. They must have regard to the likelihood of the medical treatment alleviating or preventing a deterioration of the patient's condition.

In the case of a severely mentally impaired person they must consider the ability of the person to care for themselves to guard against serious exploitation.

Whereas under the old Act a tribunal only had powers of discharge or reclassification, flexebility has now been introduced. They can now direct discharge at a future specified date. They may also recommend transfer to another hospital. This could be very useful where a person is in a top security hospital like Rampton and a Tribunal decide that, because of their impairment, they still need detaining but they could be treated in a local hospital. Whether this will make local hospitals more willing to accept these patients has yet to be assessed.

A Tribunal will also be able to recommend that a patient be given leave of absence. In this and the previous case, if the wishes of the Tribunal have not been carried out within a specified period, the Tribunal may reconvene and consider an alternative disposal.

For impaired people who are detained on restriction orders a Tribunal will be able to direct absolute discharge, conditional discharge or deferred conditional discharge.

On the 1st December 1982 Legal Aid became available for solicitors conducting Mental Health Review Tribunals. The Law Society have established a list of 'authorized' solicitors who have satisfied them that they have the necessary skill and expertise to represent patients. This will not prevent an individual patient selecting the solicitor of their choice but will ensure that if a patient asks the Law Society or Tribunal Office to recommend a solicitor they should get someone who has some experience.

1 have already referred to 'automatic referrals' and Tribunal for those detained for assessent.

CONSENT TO TREATMENT

This issue provoked some of the most contentious debate. Libertarians were anxious to wrest power away from psychiatrists who in turn were anxious to preserve their position. In no other area of medicine can doctors impose treatment against the wishes of a patient (except, possibly, children). How far should they be able to go in psychiatry?.

The provisions apply to patients detained under Section 2, 3, 37, 37/41 and 47/39. In others words, all the long term sections plus the twenty eight day order.

Treatments are divided into three categories:

1) Treatments requiring consent and second opinions;
2) Treatments requiring consent or second opinion;
3) Urgent treatment.

Treatments Requiring Consent and Second Opinions

This applies to treatments which would be considered hazardous, irreversible or experimental, namely psychosurgery for mental disorder or the surgical implanatation of hormones.

These treatments cannot be given until three Mental Health Act Commissioners (one of whom is a doctor) certify, in writing, that

there is a likelihood that the treatment will alleviate or prevent a deterioration in the patient's consent. Without consent it cannot be given. This section also applies to informal patients.

Treatments Requiring Consent or Second Opinion

These apply to treatments such as ECT and the administration of medicines. However, in the case of medicine, a person is only entitled to start objecting once they have been on such medication for three months. Until then the doctor does not need their consent.

These treatments cannot be given unless the patient consents or the doctors appointed by the Mental Health Commission certifies, in writing, that the patient was capable of giving informed consent and has consented. If this consent is not forthcoming, then the doctor appointed by the Mental Health Act Commission must certify that either the patient has not consented or that they are not capable of consenting but, having regard to the likelihood of its alleviating or preventing a deterioration in the patient's condition, it should nevertheless be given.

Where consent is required, it can be withdrawn at any time unless the patient's doctor certifies that discontinuance would cause serious suffering to the patient.

Urgent Treatments

This refers to treatments which: are necessary to save life; prevent a deterioration in the patient's condition; alleviate serious suffering; or are the minimum interference necessary to stop the patient behaving violently towards themselves or others.

MENTAL HEALTH ACT COMMISSION

In respect of compulsorily detained patients, the Commission visits them, inspects records, investigates complaints and reviews decisions to withhold letters. They appoint the Registered Medical Practitioners needed to comply with the regulations on consent to treatment (see above) and also prepare a Code of Practice. This Code will provide guidance for doctors, hospital managers and staff, and approved social workers in relation to the admission of patients. It will also provide guidance for doctors and members of other professions in relation to the medical treatment of patients suffering from mental disorder.

Section 121 could be one of the most significant sections in the new legislation. At first it looks quite innocuous. It states:

> "The Secretary of State may, at the request of/or after consultation with the Commission and after consulting such other bodies as appear to him concerned, direct the Commission to keep under review the care and treatment, or any aspect of the care and treatment, in hospitals and mental nursing homes of patients who are not liable to be detained under this Act."

The Commission therefore, if allowed by the Secretary of State, will be able to concern itself with the welfare and treatment of non-sectioned mentally handicapped people in hospital or mental nursing homes. If this power is used imaginatively it could have major implication for their well being.

The Commission will have to publish a report on its activities every two years and lay a copy before Parliament.

HOSPITAL MANAGERS

Hospital Managers have a number of important statutory duties. Under Section 68 it is their duty to ensure that patients who have not had a Mental Health Review Tribunal in the first six months of a hospital order have their cases referred to a Tribunal. This must occur thereafter at the expiration of each three year period.

When a mentally handicapped person is sectioned they will most probably be confused and frightened. Under Section 132 a Manager must ensure that the patient understands which section they are detained under and their rights (if any) to apply a Mental Health Review Tribunal. Detailed information must also be given to explain to each patient their statutory rights, including consent to treatment, and all the information must be given orally and in writing. Copies of this must be given to the nearest relative.

Finally, the Manager, already bowing low under weight of his or her duties, must give the nearest relative at least seven days notice of discharge. Managers are going to have to become far more involved in patients's welfare.

AFTER CARE

Section 117 of the new Consolidation Bill slipped into the Mental Health Amendment Act almost unnoticed. Its provisions could, however, be far reaching and expensive. It applies to patients detained under a treatment order under Section 3 or hospital order under Section 37 or transferred to a hospital under sections 47 or 48.

There is a <u>duty</u> on health authorities and social services to provide, in cooperation with the voluntary sector, after-care ser-

vices for the above groups until they are no longer needed. It will be fascinating to see how some of the Authorities discharge this new statutory duty.

CONCLUSION

The legislation has not reviewed in any way, the antiquated processes of the Court of Protection, and this body must now be subjected to a critical review which must lead to its modernization.

The effect of this legislation will be to reduce the number of mentally handicapped people compulsorily detained in hospital. On the face of it this must be a step forward. However, unless it is accompanied by greater community provision and support, the consequences are inevitably a greater strain on families, more homeless mentally handicapped people and more mentally handicapped in prison.

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PUTTING NORMALIZATION INTO PRACTICE

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INTRODUCTION

This chapter is meant to complement and therefore be read in conjunction with Paul Williams' account of "the nature and foundations of the concept of normalization." In it a service in which 'normalization' is an explicit and guiding principle is examined.

Many of the hostels and day-centres that are visited now by groups on introductory Programme Analysis of Service Systems (PASS) training workshops, or by experienced evaluation teams are based on assumptions that were current in the late 1960's and early 1970's. The 'new' ideology suggested that handicapped people should live as part of smaller groups, in buildings that were as 'homelike' as possible; also that a range of services should be provided for a local community including support to families; that handicapped people should not be segregated unnecessarily from non-handicapped people. The need for individualized assessment and training was also emphasized.

However, at best, the philosophy was incomplete and without operational definition. Consequently, within such a framework, it was possible to encourage the building of smaller handicap hospitals, 25 place hostels and multipurpose Adult Training Centers. In doing so planners perpetuated many of the damaging role perceptions of handicapped people that Paul Williams has referred to: as people who are 'sick' and therefore need nursing care and as people who may be frightening and therefore should at least live on the edge rather than in the middle of things and as 'perpetual children' in need of lifelong training.

Often the main goal was simply to meet a need for a service to parents and families, to plug a gap. The damaging effects on the handicapped people of such are now inevitably there for us to see, especially those who are familiar with PASS.

But what about a service that was planned during the late 1970's, informed by some of Wolfensberger's (1972) writing on normalization and knowledge of some of the newer community based services in North America (Thomas et al., 1978), as well as by more optimistic psychological approaches to the teaching of people with handicaps? Here it should be legitimate to use normalization - "the use of culturally valued means in order to enable people to live culturally valued lives" (Wolfensberger 1980) and PASS as a basis for critical evaluation.

What is the service like: what 'means' have been used? Are the opportunities and experiences available to consumers valued ones? Are relationships with valued members of the community a feature of the new service? Is there proper and appropriate individualization?

What are the effects or 'outcomes' in terms of the behavior, characteristics and skills of the clients and their feelings of worth, self-esteem and identity? Has the service and the progress of clients brought about changes in the feelings, beliefs and behavior or family, carers and other members of the local community? Have conscious efforts to interpret people with handicap in positive ways had impact on others?

This 'case study' is offered, therefore, to help to illustrate some of the concepts introduced by Paul Williams and show how ideas about physical and social integration and age appropriateness can be used to analyze a human service. Through this kind of description it is hoped that readers will be encouraged to think more clearly about the design principles that may be shaping services in their own locality and debate constructively the constraints that exist in achieving a more valued status for handicapped people in our society. For those who want more detail about the services in order to help them with specific local project planning, there are a number of other reports (Thomas, 1981; Northumberland Health Authority, 1982 and Thomas, 1984).

THE YOUNG PEOPLE AND THEIR FAMILIES

First the young people who between January and May 1981 moved into their new home at 224, Alexandra Road will be introduced. Those who planned and developed these houses have argued consistently that services must be shaped to meet individual needs and that such needs are likely to be strongly influenced by previous physical, social and developmental 'environments' experienced by the potential clients.

Jane was 16 at the time of her move. She had lived in a hospital on the outskirts of a market town, 14 miles to the north of Newcastle upon Tyne, since the age of 2 years, following the death of her mother. During her teenage years she had had only intermittent contact with her father who had remarried and moved out of the area, but her sisters had kept in touch with her. In place of family had been a succession of teachers and nurses. Jane had spent some Christmases in other family homes, but rarely in the same one twice.

Consequently she had lived for most of her childhood with other handicapped children, most of whom were more handicapped than herself. Many had no speech, some could not walk or had restricted mobility and many had odd or destructive behavior. She had attended a school in the hospital grounds and met non-handicapped peers only when on visits to shops or occasionally to the cinema etc. Jane's only close friends were another young woman with Down's Syndrome and a boy who lived on an adjacent ward.

When not a school, Jane spent most of her time in the ward, where she was most often seen helping staff in a variety of ways or watching T.V. Most of her time was spent in 'day rooms' and very little time in other areas such a kitchen or her own bedroom. Jane's life, therefore, had very little in common with that of non-handicapped teenagers.

At the time of her move she was fairly competent in personal skills. She could feed and dress herself. However, her numercy and money handling skill were very poor. As well as fairly restricted vocabulary her speech was quiet and indistinct. She was an immature and underconfident young woman.

James was 25 years of age at the time of his move. He had lived with his family in Lynemouth until he was six years old. This meant that whilst James had an established relationship with his elder sister, he had no opportunity to get to know his younger sister and brother who were born after his admission to hospital.

For a variety of practical reasons and a lack of adequate professional intervention he grew up with decreasing contact with his family. In its place was a multitude of caretakers and large groups of handicapped children. James developed no real friendships with other children in the ward on which he had lived and mainly sought contact and attention from staff members.

In the ward he would pace around usually in a large day room. It was difficult to engage his attention or sustain his involvement in individual leisure or other group activities. Like the other children he spent no time in the kitchen and was allowed to use his bedrooms, which he shared with several other children, only for sleep.

James could feed himself with a spoon and fork and drink from a cup with two hands; he didn't have toilet accidents during the day. His dressing skills were limited. His vocabulary included a number of single nouns, many of which were used repetitively and not usually appropriately. He was able to understand simple instructions.

When James left Northgate his behavior was very unacceptable and worrying. He would spit at others, poke people in the eye or pull hair and strike other residents. His physical aggression towards more dependent children was a source of anxiety to hospital staff. He would also tear up magazines and books and bang windows on the ward. He would disrupt others' activities by snatching things out of their hands, sprawling over furniture, turning on the T.V. too loudly and fiddling with switches generally. James also has several stereotyped behaviors and odd mannerisms such as flapping his hands and holding his head tilted. He frequently walked on tiptoes. He had some inappropriate interpersonal manners which included talking too close to other's faces and attempting to hold hands, laughing and clapping inappropriately and miming and repeating words over and over. James drooled and bit his fingernails. He occasionally showed self-aggressive behaviors such as head banging and nipping himself, throwing tanrtrums when he did not get his own way and running away from the ward. He would often act silly to gain attention.

Keith was fourteen when he moved. He came into full-time care in the hospital at the age of one. Throughout his childhood his mother visited regularly but he spent no time in the family home.

He was blind and multiply handicapped. He had head control and could move an arm. When lying on the floor on his back he could roll from side to side. He had no speech. He was doubly incontinent and was completely dependent on others. He regularly vomited after his meals.

His physical incapacity and his small size and weight led to him being treated in the ward very much as a baby, to be fed, kept warm and dry. His intellectual handicaps produced low expectations and he was offered little in the way of development activities.

Observation on the ward prior to his move to his new home showed that he spent a large amount of his day when not in school, lying on a small trampoline unoccupied. He was rarely in physical contact with others and other people rarely spoke to him.

Melanie, the youngest number of the group, was nine years of age. She had a brother two years older than herself. She came to live at Northgate at 11 months of age. Her contact with her family over the years was better than the others. She spent weekends at home and was visited regularly.

Like Keith she had severe physical handicaps but was able to sit unsupported and had better use of her arms and hands. She was also able to stand with support and the use of calipers. Her hearing and vision were also good. She was incontinent, but would sometimes use a potty when placed upon it. She was fed on a soft diet, with some difficulty owing to a pronounced forward thrusting of her tongue. She had to be dressed and washed and would offer little voluntary assistance in these processes. She was a poor sleeper, particulary on her visits home. Whilst she could communicate happiness and displeasure, she was not very attentive to communication from others. She often sought physical contact with two other children on the ward and tended to be 'bossed about' by Jane.

Madena was the last to move and at that time was 24 years of age. She had lived with her family in a fishing town about 3 miles from Ashington until she was 7 years old. Her family had resisted her being admitted to Northgate but had waited for almost two years for appropriate aids and practical support, which arrived after the family had endured one too many crises.

Madena had only learned to walk after an orthopaedic operation when she was 11 years of age. In the ward she was doubly incontinent. Although very responsive to adults and other children she was often left unoccupied and consequently was often destructive of property.

Like the other children she rarely went out of the ward in the evening or at weekends. She was never seen in the kitchen and most of her time, when not at school, was spent sitting on the floor of the large day room.

THE SERVICE

The service is a residential one in the county of Northumberland, England. It involves the provision of accommodation in ordinary houses and salaried staff support for some severely and profoundly handicapped young people. These people, mainly teenagers, had lived for many years, if not most of their childhood, in a mental handicap hospital. For the majority it was a move back to the locality from which they had been admitted or where parents or close relatives now lived. All three houses are rented from local District Councils in Northumberland, but adapted, furnished and staffed by the Health Authority.

The first group of five moved in January 1981 into a four-bedroomed terraced house in Ashington (their ages are now 11, 17, 17, 18 and 19 years). The second group moved in the summer of 1982 into a four-bedroomed semi-detached in the Blyth area. Their ages are now 12, 16 and 19 years. The third group of four moved in July 1983 into

a four-bedroomed semi-detached house in Berwick, in the North of the County. All four can walk and their ages are 16, 17, 18 and 22. (One has since returned to the hospital.)

Only the first house at Ashington is described here. At the time of writing (February 1984) it had been open the longest, three years, and therefore positive judgements about the service and its staff cannot easily be put down to novelty or the first flush of a new scheme. Equally it seems a fairer test of the progress of the young people and of the involvement of parents and community. All houses share a common operational policy and a similar staffing complement. Carers are recruited, trained and organized in the same way. There are of course, important differences - the young people, the mix, the personalities of the staff members and the type of communities in which the houses are located, to name a few.

What would a visitor to 224, Alexandra Road find? In particular what is the house like, what sort of neighbourhood, what is it near to? What amount of support is available from 'paid helpers' within the house and from visiting professionals? How are the staff recruited, trained and organized? What happens on a typical day to the young people? Who are their friends? What is their life like? Is it anything like that of their non-handicapped peers?

The House and its Location

The house is a terraced one in a mining town in south-east Northumberland. Externally it is identical to the other five in the terrace. It is brick and has a tiled roof. There are no extensions or adaptations, no signs or nameplates. It overlooks a busy main road. To the rear is a small access lane. The house is located in a residential area mainly consisting council houses and flats, but is within 100 yards of a private estate.

It is within easy walking distance of local shops, a grocer, newsagent etc., parks and a Social Club. The town center with a wider range of larger shops and other community resources, banks, travel agents, insurance brokers, solicitors etc., is about a mile away. There is also a Sports Center with a swimming pool in the town. There is a regular bus service to the town and then on to various parts of south-east Northumberland, with bus stops nearby. The house is also on a main bus route to Newcastle-upon-Tyne, the nearest large city. Inside the house, furniture and fittings are much as you would expect to find in a typical family home. The kitchen, in addition to cooker, fitted cupboards and fridge-freezer has an ordinary domestic automatic washing machine and tumble dryer, located in a space created by the removal of a coal shed.

Downstairs there is a dining room and a living room and a toilet/cloakroom. All have ordinary but attractive furniture. The living room has a gas fire which through its back boiler provides central heating in every room. Good quality carpets and wallpaper have been used throughout the house. Lighting is of a domestic character.

Upstairs there are four bedrooms, one single, which is Melanie's, one for Jane and Madena and one for Keith and James. The smallest bedroom is used by the 'sleep-in' member of staff. There are divans, wardrobes etc. Each bedroom has been decorated according to personal taste.

The main visible differences between this house and others in the neighborhood is in concessions to safety and mobility. There is a small wooden ramp to ease access by wheelchair from the back of the house. There is also an internal bolt mounted on the back door so that it can only be operated by an adult. All the internal doors have self-close mechanisms; there is also a large fire extinguisher kept in the downstairs washroom and a fire blanket is mounted on one wall in the kitchen. There is also a two-way intercom between the staff bedroom and those used by the young people.

The main differences between the house and the ward, apart from scale, are that there are no separate staff toilets; mirrors are plentiful; all rooms are accessible to young people; decor is varied from one room to another and fitments and furnishing are domestic.

Staffing

The central importance of carers in putting normalization into practice in residential services is now widely recognized by parents, managers and other practitioners. Not only are the relationships they establish and the learning opportunites they create likely to produce change in behavior and skills of the handicapped person, but their attitudes, beliefs and relationships are likely to shape the perceptions of other people such as family, teachers, employers and neighbors.

Those who have attemped to bring about changes in the professional practice of nurses in mental handicap hospitals also have come to realize that changes in name from 'nurse' to 'teacher' or 'social worker' even if accompanied by modifications to training syllabuses and increasing the overall staff ratios are not likely to be sufficient.

In addition, decisions about staff roles, the way staff are deployed are organized (as well as the number of staff available), the authority of the person 'in charge' and decision making struc-

tures and procedures within the house as well as selection, preparation and ongoing support are likely to be of critical importance.

In this project, a number of important departures from tradition have been made. It is for others to judge whether the decisions made about staffing model have mediated positive changes in the lives of these young people and models of this kind project positive images.

There are eight full time 'home staff' in each of the three houses, the majority of whom are woman. Their ages range from eighteen to forty. There is one 'home leader' instead of the more usual dual 'Charge Nurse' or Officer in Charge and deputies arrangement common in NHS and Local Authorities respectively. There are no separate day and night staff. No staff live in the houses, but three share a 'sleeping-in' rota. The carers perform a full range of housekeeping tasks as in an ordinary family, including shopping in local shops, washing, cleaning, decorating and simple repairs. There are no domestic or catering staff. Local firms are contacted for any plumbing or electrical work that is required. The house is independent in that it does not rely on the Health Authority for services such as works or supplies. The home leader has a household budget. Staff eat with the children. They do not wear uniforms or standard issue clothing.

Staff are deployed to be there when the children are there. During weekdays in 'term time' this means that two or three staff join the person who has 'slept-in' at 7.00 a.m. They go off duty about 10.00 a.m. Two different staff come on at 3.00 p.m. and work through until 9.00 p.m. or later. At weekends and during holiday periods more long days are worked.

In addition, recruitment of staff has been mainly from the locality. One result is that they are prepared to work very flexibly (e.g. short shifts, shifts which end late at night and, when necessary, extra time). Another benefit has been that these people bring with them a ready made network of local friends and social contacts with whom the young people can begin to integrate.

Staff were selected because of their positive attitudes and beliefs about people with handicaps rather of previous experience or formal qualifications.

The three week orientation training developed for 'direct-care' staff has been outlined elsewhere (Allen, 1983). Because it was known which young people would move into each house it was possible to shape much of the teaching around individuals and to ground the introduction of 'nomalization' in their experiences. Secondly, staff were able to begin to think about the activities and programs that each young person might require and to learn about local resources

and teaching techniques which might be used. The third component was learning about each other as members of a team whose effective joint functioning would be essential if the service was to be of high quality.

An important feature of the service is the 'support team' consisting of Assistant Director of Nursing (Community), Psychologist and Social Worker. Each is expected to provide advice and support from within their own area of professional expertise and in the case of the Assitant Director, a management role. However, all three also have an ongoing responsibility through 'positive monitoring' to ensure that standards are maintained with normalization as a reference point. Problem solving with the direct care team can also be facilated by this group.

The 'home staff' meet with the support team once a month and at least every second meeting involves everyone. In addition to ongoing discussion about the programs of individual children and their relationships with their families, there is an individual program plan meeting on each child at six monthly intervals. This is usually held in the house and is attended by all involved in the young person's care. At these meetings it can be seen what a wide network of professional help, including speech therapists, physiotherapist, teachers and doctors is available.

One of the hopes of those who planned this service was that the staffing model, together with opportunities for staff support and renewal, would produce not just flexibility and imaginative working practice, but also continuity of care. Absenteeism and sickness have been low. Of the eight staff who originally came to work at 224 Alexandra Road, four remain. During this time there have been six others carers (3 have left to have families and two to start general nurse training). The size of the staff team and the recruitment of predominently young women has produced some discontinuity of care, although significantly less than in hospital. It should be added that three of those who have left have kept in regular contact.

Life at 224 Alexandra Road

One of the main characteristics of life at Alexandra Road is that there are no set patterns except those experienced by other people which relate to education, work and travel. During 'term time' daily routine is much as you would expect in a large family. The day begins at about 7.00 a.m. when James, Madena and Jane get themselves up and the 'sleep-in' member of staff is joined by two colleagues. Keith and Melanie usually join them a little later. After breakfast, which is prepared by one of the staff, the young people wash (or are washed) and get dressed. Some of the household chores are undertaken whilst waiting for the taxi which arrives between 9.00 and 9.30 a.m.

They have lunch at school and return home about 3.00-3.30 p.m. Jane's day is slightly longer; she goes on her own by bus to a course for handicapped school leavers in a Newcastle College. She leaves the house at 7.45 a.m. and usually gets back about 5.30 p.m.

There is no set teatime and no set bedtime. At the weekend and during holidays, the young people get up when they want to. Bathing and dressing are much more leisurely unless something special has been arranged.

During holiday time, day trips are arranged. Often this involves the use of a borrowed mini-bus. However, efforts are made to split the group up in order to meet the interests of each individual. Since they moved in, summer holidays have been spent at Silloth in Cumbra and Great Yarmouth, which included a day trip to France. In 1983, two went to the Isle of Man and three went to Denmark.

Each person's birthday is celebrated with his or her interests and wishes in mind. For example, Jane hired a room in a local pub and had a disco, to which her family, friends and neighbors came.

Within the house there are many more choices than were available in the ward. The young people have been given opportunities to develop a far wider range of interests and staff have a good grasp of what are preferred activities for each and how to use natural environments to establish and maintain new skills. The young people are able to participate in cooking, cleaning, washing up and decorating. Although only Melanie has her own bedroom, the importance of being alone and having privacy when you want is usually recognized. James likes spending time in his own room. Jane likes a long lie in the bath. James, Jane and Madena move freely around their home.

The use of leisure time in the house is remarkable only for its ordinariness - watching T.V., listening to radio or records, playing video games, playing cards. James enjoys electrical gadgets and rough and tumble. Jane enjoys card games and spending time over the choosing of her clothes and her appearance. Keiths like to be warm and comfortable and to listen to what is going on around him. Melanie enjoys physical contact and watching cartoons on T.V. Madena enjoys playing games, singing and listening to music.

All the young people have many more personal possessions than when they were living in hosptial and somewhere safe to keep them.

Staff interaction with them is more frequent and they are spoken to much more often than in hospital. This is less likely to be for the purpose of negative control - "Stop doing that", and more likely to be a positive instruction - "Will you help me with ..." or informative - "Look what I have here."

On the whole they are spoken to and about in an age appropriate way, although Keith and Melanie despite their ages are still referred to as 'little ones'. Written reports in the house diary tend to project and emphasize positive characteristics and progress and to project positive images. A lot of affection is evident in the relationship between the carers and young people.

One of the major deprivations of care in most mental handicap hospital is the lack of contact with non-handicapped people (other than paid employees). Those who planned this service argued that the young people should have access to "a full range of facilities such as shops, cafes Sports Center and swimming pools" and that "good relationships should be fostered with families, peers and neighbors." It was also decided that the children should "register with local G.P.'s and dental practitioners" and wherever possible use generic rather than specialized services.

In the four weeks prior to their move, which included the Christmas holiday, only Jane and James went shopping, none went to a cinema, or restaurant or to any other public facility. Keith visited a friend's house. Jane visited the home of one of the ward staff and Melanie spent time with her parents at home. None visited any generic practitioners outside the hospital.

Table 1

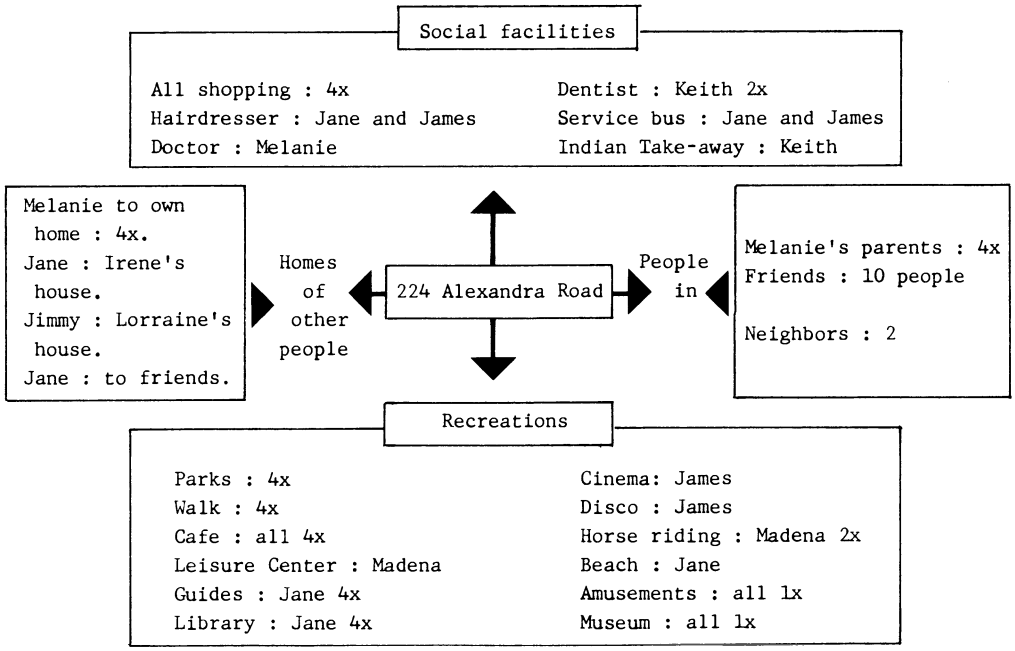

Table 1 illustrates the opportunities to meet non-handicapped people enjoyed since the move to Ashington during a four week period in Spring, 1982.

SOME 'OUTCOMES'

Observation of these young people prior to their move and subsequent reviews/assessments makes it possible to assess some of the major 'outcomes' or benefits.

First, their appearance has changed. Their clothing is more attractive and appropriate to their age (4 are teenagers). Jane has lost weight and is now very much more clothes conscious. It was not considered unusual for Susan - one of the staff - to make a trip to Alnwick some 25 miles away in order to get an anorak which suited Keith. He now vomits his food less frequently so he is not seen with a semi-permanent napkin or paper tissue below his chin. All the children are now more likely to be seen in more normal postures.

Melanie spends more time sitting in a chair or on a sofa than on the floor. Her posture has been improved by the use of a body brace designed to correct a severe curvature of her spine. Keith now has a larger orthokinatic chair, which makes him look older. James is now more likely to be sitting and less likely to be wandering around in the house and is now rarely seen on his tiptoes. Whilst Madena's gait remains abnormal, improved balance and more confidence in her ability to walk means that she is less likely to hang on to others or grab at nearby supports. Both Melanie and Keith spend more time standing with assistance of leg calipers and other aids.

In order to assess systematically changes in their behavior and personal skills, behavior rating scales were completed in 1979 and 1980 prior to the move and subsequently at yearly intervals. Direct observation of the children in the ward was made immediately prior to their departure and then again in January 1982, September 1982 and March 1983.

All the children have shown gains in adaptive behaviors following the move to 224 Alexandra Road, which have been consolidated and improved in their second year in the new home. Jane, James and Madena have made the most progress, Melanie and Keith somewhat less.

Four are much more likely to be 'engaged' or occupied in a purposeful way. This judgement is based on direct observations, using a momentary time sampling technique. The change is statistically significant and has been sustained. Within the house all are more likely to initiate verbal or gestural communication with carers or other people. Jane was already showing a high level of purposeful activity in the ward. Here the changes have been in the complexity

and age appropriateness of her play, work and interactions with others.

Jane is now much more confident and assertive. She shows this in a variety of ways. She is now more prepared to speak to other people, often initiating conversations and using complete sentences. This is partly due to her acquisition of a larger receptive and expressive vocabulary. However, her speech is still somewhat indistinct.

She is able to travel independently on public transport and does so daily during term time to college in Newcastle. She is now able to make her own purchases at local shops, with some assistance from shop assistants who have got to know her. Her numeracy and money handling skills remain poor.

She is still 'over-familiar' with strangers and has difficulty in understanding various kinds of friendship. However, she is less attention seeking and much more likely to behave in a adult manner. She now has several friends of her own age. Some are handicapped, some are not. Her friends at the Guides tend to be younger than herself, but through participating in this group she has learned many important social skills. Jane now has a wider circle of adult friends and acquaintances. Her friendship with her sister is also developing. Increasingly she is seen by others as a young woman rather than child.

James has made considerable improvements in his self-help skills he is no longer described as a messy eater, he can now put his underpants and trousers on unaided, but still has difficulty with his vest. He is able to help in a variety of ways around the house, setting and clearing articles from the table after meals, putting his clothes away neatly in his drawers. He also helps with food preparation and loves to use a whisk.

Perhaps the best way to convey both his overall progress and the pleasure that this has brought to his mother is to reproduce verbatim his mother's submission as part of an assessment under the 1981 Education Act:

"James is continuing to master new words and phrases and use them in the correct context. His vocabulary of understanding what people say is obviously much wider than that spoken. A more intense speech program would surely benefit James.

Memory is closely associated with intelligence. James has a good memory. This factor is paramount concerning all his abilities not least including the ability to learn. Also closely associated with memory and intelligence is the fact James can abandon important information that has become out of date. James assimilated the fact

that I had moved immediately on his first visit to my new home. He no longer becomes excited when passing through Lynemouth but transferred this appreciation of where I live by shouting 'Mam' while he is in the vicinty of Cramlington.

James is becoming mature. This characteristic needs encouragement and development if he is to communicate successfully with both non-handicapped and handicapped people. He must also be taught to assimilate other people's emotions. Both factors will help him to become more socially acceptable. James is rarely bored and usually shows keen interest whenever given attention. He is responsive to most approaches. He is interested in television and video and also in CB radio to which he listens carefully particularly when spoken to personally. It seems there must be many ways of holding James' interest while he is being taught.

James has good motor skills. A review of his advancements made in recent years implies that much more could be achieved if his learning curve is maintained. His sense of balance is now very good - he has been caught several times standing on high stools to retrieve objects hidden from him on kitchen cupboard tops. Health staff are currently giving attention to fine finger movements. I feel their work would be complemented and supported if James' schooling included education in practical skills such as bat and ball games and art and craft work with aspects chosen and designed to exercise eye and hand co-ordination and the finer motor skills."

These views are shared by staff who know James well. Markedly reduced are the silly behaviors described earlier in this chapter. He now shows concern and affection for other people, particularly his family and Keith. His friends now include Lorraine, Frank, local boys and members of the CB Club.

James has discovered a personal identity and this was well expressed by his mother who says that James now shows behavioral characteristics that are typical of members of his family.

Keith is a person who many predicted would not benefit from the move to a house in the community. Whilst it is true that no demonstrable progress has been made in his ability to do things for himself, many important changes have occurred.

Staff report that he is taking a much greater interest in his environment. For example, he is paying more attention to sounds and it is felt that he is able to distinguish the voices of those he knows and to respond to his name by turning and smiling. He is able to express a wider range of emotions. Consequently, carers are more likely to want to try new activities with him and to extend his range of experiences. He is said to be able to show his preference for particular kinds of music. He is more likely to reach out to touch objects. He now tolerates standing with calipers.

He is reported to be eating better (chopped food rather than liquidized). He shows a liking for foods that are spiced and is much less likely to vomit after meals. He has gained a little in weight. He will also open his mouth more readily when he detects a light touch on his lips. He is also sleeping better, in a bed rather than in a cot. He is less prone to respiratory illnesses and there has been no occurance of life-threatening hypothermia which was previously a constant source of worry. At 224 Alexandra Road, the central heating system permits better regulation of room temperatures in various parts of the house than was possible in the ward.

Keith has re-established contact with his twin brother and grandmother. His mother is also taking a much more active interest in him. Unfortunately he has lost contact with a non-handicapped friend, Hazel, with whom he used to spend weekends. She has moved to a new job in Manchester.

Melanie is now much more alert and attentive to what is going on around her. This important change seems to have generalized to her parental home. She is said to be able to concentrate for longer and this means that she can join in and enjoy group activities and co-operative play in her new home and at school. She has had an opportunity to show a sociable side to her nature that was not so apparent in the ward.

She is attempting to communicate through noises and face and body movement much more. She is now much less likely to scream or cry to indicate her needs. She is able to convey a wider range of emotions to others. Generally she is described as a happier and much more relaxed child.

Like Keith, because of her severe physical handicaps, she has not made any major gains in her self-help skills. However, the use of a musical potty is helping her to stay clean and dry during the day. She is eating much better and reduction in a marked tongue thrust makes feeding her much easier.

The patient attempts to encourage other motor skills is also paying off. Her standing balance has improved through regular exercising. She skows a greater natural corrective response if she feels she is losing her balance.

One important change is in the way that Melanie is viewed by her parents and her brother. She has always been very much an important part of the family. However, she is now spending increasing amounts of time at home and this is now an enjoyable experience for all the family. Melanie's mother summarizes some of her feeling in the following way:

"Melanie has changed from a child who woke up every night, was given a sedative and was consequently dopey, wingey and unhappy.

She now sleeps all night, is happier and much more alert and relaxed. She is obviously enjoying life now. Whereas before I felt I was borrowing her from the hospital, I now feel we have much more influence in her upbringing."

Madena now has busy life. She attends a local special school and is viewed positively by her new teachers. At home she participates in the preparation of meals and likes to wash up afterwards. Because clear limits have been set she has learned what kind of behavior is expected within various parts of the house, e.g. the kitchen. Her behavior at the table is now much more acceptable.

Her improved mobility has already been noted. In the house she is much more likely to be seen sitting than kneeling and is able to move freely around her own home. Outside she walks further and with greater confidence. Her progress has encouraged direct care staff and physiotherapists to continue their efforts to improve her gait.

Soon after her move to the house she learned to indicate when she wanted to go to the toilet and rapidly relinquished her habitual incontinence. She now sleeps right through the night. She is less excitable and attention seeking. She has learned to communicate in other ways and is better at expressing her feelings. She is now rarely destructive of property and much less likely to put things in her mouth. Her play is more directed and she now joins in sensibly with group activities. She enjoys trampolining at a local Sports Center and horse riding with non-handicapped young people. She is much less rough with the horses! Her understanding of what others are saying has improved and she had increased her Makaton vocabulary.

Whilst close contact with her family has not been re-established, she does now meet members of her family, especially her grandmother, in the street. Madena now has new friends at school, but none who are not handicapped. Her ability to learn, her sense of humor and friendliness were never in doubt. What has happened is that the move has provided the occasion and context for much new learning. She has learned what is 'normal' in her relationships with others and has developed as a young woman.

COMMENT

The service has been shown to be feasible. It is possible to obtain and adapt ordinary housing. Parents will agree to the transfer of these childran from hospital. It is possible to recruit and retain staff. The children have not been hurt but one has had to return to the hospital from the Berwick house. There has been only one serious complaint from the community. Beyond this achievement on 'minimal' outcomes the evidence available suggests that the quality of care is better than it was in hospital. The young people are less

likely to experience 'block treatment', 'rigidity of routine' and 'social distance' and more likely to experience care that is individualized and geared to their development needs (King et al., 1971).

They are more likely to be spoken to and interacted with by carers and they have a much wider range of experiences in and out of the home. They are more likely to be occupied in a purposeful way and are much more likely to meet non-handicapped people.

However, at the beginning of the chapter it was argued that any service which claims to use 'normalization' as a guiding principle should welcome critical evaluation of both 'means' and 'outcome' against standards that we would value for ourselves and our children and friends. How does this service measure up?

Nearly all the 'handicapped experience' listed by Paul Williams as part of a 'career of devaluation' were ones that had figured large in the lives of Jane, James, Keith Melanie and Madena. They had limited experience of family and community living and, with the exception of Melanie and James, nowhere that they could really call home. They had grown up in the company of many other handicapped children, but remained largely without friends. They had experienced massive discontinuity of relationship with adults carers. They had very limited experience both within the hospital and outside and few opportunities to learn important personal and social skills. On the whole, they were viewed by carers and parents as younger than their chronological age. In the hospital their 'medical' and nursing' needs tended to be emphasized. Their individual personalities, strengths and social needs were largely unrecognized. There was a high degree of routine and control in their lives.

These common or shared experiences are <u>not</u> what most of us value. They suggest that any program which claims to be grounded in 'normalization' would set the following as major goals for these young people:

1. Re-establishing contacts with families.
2. Becoming part of a community to which other valued people belong.
3. Opportunity for choice.
4. Experience of challenge and risk and a variety of learning opportunities.
5. Having a home like other people and with some security of tenure
6. Experiencing some continuity in relationships with significant adults.
7. Having friends who are valued members of the community.
8. Being viewed as a person and more specifically, a developing adult.

Such a program would also have to show that in addition to meeting needs common to all five young people it should be able to address specific individual needs.

Some of these aims were made explicit during the planning stages, in particular the first four. Others can only be inferred from key decisions that were made about staffing, group size and selection of the young people.

Many of these objectives have been achieved. The re-establishment contact not just in terms of frequency but in the quality of relationships can be seen as a major success. They have become someone's child, someone's brother or sister. James, for example, is able to show his love for his mother and to receive love in return.

In some senses they have become part of the community. They live where other people live. They identify with and are identified with Ashington. They know and are known to many local people, not just neighbors but the extended network of friends and relations of staff, shopkeepers, Sport Center staff etc. However, they do not attend ordinary neighborhood schools and because they are still technically Health Service patients, they do not have access to a full range of financial benefits.

Their opportunities to choose, to express preferences and to be consulted are vastly improved. The move to Ashington has brought with it a wide varity of new learning opportunities and challenges and this has led to the acquisition of many skills. However, unlike children of similar ages they still spend relatively little time in the company of non-handicapped peers. This inevitably reduces the availability of appropriate role models.

Whilst they do have a home that they can treat as theirs, in which their privacy can be respected, possessions kept and to which friends can be invited, it is not legally theirs, nor is it held in trust. Consequently, whilst operational policy documents state that it is their home for as long as they need it, security of tenure is based on 'understandings' rather than legal rights.

Continuity of staff care is not as high as was hoped, although vastly improved in comparison with that experienced whilst in hospital. Friendships have developed with various adults who are members of the community and with some peers. But again, this is an area of need which requires considerable effort by the program's staff members.

There are many examples of major changes in the ways in which all five young people are viewed by others, but the issue of 'age appropriateness' remains a problem particularly for Keith and Melanie.

It is not possible to tease out the relative effects of various factors in the process of 'revaluation'. However, review of early planning choices and the ways in which the service is now delivered show a sensitivity on the part of planners, direct-care and support staff to both the direct effects of service settings and structure on the behavior of those with handicap and to the messages such services can convey to others. There is evidence of an understanding of the way in which the congregation of those who risk devaluation and the juxtaposition of devaluing images can create major barriers to social integration. The importance of careful and detailed choices about physical integration which pave the way for skilled and energetic encouragement of social integration was also recognized.

For example, the decision to return identified children to their home localities in turn allowed choice to be made about centrality and convenience of access to families. With the exception of Jane, all the families live close by. This has undoubtedly created necessary (though not sufficient) conditions for improved contact between several of the young people and their parents, siblings and extended family.

The location of the house in a residential area, but not in association with other programs for devalued groups, is another example of a positive choice. It at least reduces the likelihood that other deviant characteristics will be associated with these children and of barriers to contact with neighbors. Its proximity to social resources is good, but not optimal. Other houses are closer to the town center but the decision to rent rather than purchase and to request a four bedroomed house probably reduced the possibilities as far as location was concerned. This point is worth emphasizing as optional location may require greater flexibility in the means of acquiring property (e.g. private renting or purchase).

The house, which is known simply as 224 Alexandra Road does not attract any undue notice. The decision to use an ordinary house 'says' that those who live there have a need to have somewhere to live and call home. The acceptance that these young people can continue to live there as long as they need/want, rather than being moved on arbitrarily at a particular age further emphasizes this point.

The house is attractively decorated, furnished and equipped, probably at a somewhat higher standard than other houses in the neighborhood. It is a comfortable place to live or visit and little damage has been done to wallpaper or carpets, despite predictions to the contrary. The normal size/scale of the rooms, together with clear purpose, e.g. living room, dining room, kitchen etc., encourage both the young people and visitors to use these rooms in a normal way in contrast to the large day rooms on the ward. The safety and fire precautions are unobtrusive and sensible ones. They do not scream out "these are very special people."

To conclude, it will be necessary to address a number of important 'problem' areas in the future. The first is the fact that in this service, despite the undoubted influence of the 'principle of normalization', care is provided to a group of young people with mental handicap. Should more individualized accommodation be sought? Secondly, whilst an appropriate agency provided the houses, their funding, management and staffing remain a Health Service responsibility. Are there other more informal ways of providing the friendship and support that these young people are likely to require throughout their lives?

The benefits both to the young people and to the community are already plain to see. Jane, Keith, Melanie, Madena and James have all acquired appearance, behavior, reputation and status that are valued. Can sights be set even higher? There is every reason to believe that coherent and principled change is well within the capacity of those who planned and developed this service.

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APPROACHES TO ANXIETY BASED PROBLEMS

APPROACHES TO ANXIETY-BASED PROBLEMS:

AN INTRODUCTION

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All of us, with the possible exception of people suffering from certain severe personality disorders, are familiar with the experience of anxiety. Its manifestations may be physical, mental or both and only intensity and frequency separate the normal experience from that deemed pathological.

The physical manifestations of anxiety often include the irregular muscle action of the diaphragm, referred to as 'butterflies' or 'the stomach churning' or more severe feelings of nausea. There may be vomiting, peristaltic irregularities, cardiac palpitation, muscular spasms, dizziness, diarrhoea, air hunger, asthmatic attacks, sweating, cold extremities and other autonomic nervous responses. Mental manifestations range from specific fears, for example of insanity or of death, sometimes attached directly to the perceived meaning of the physical symptoms, to a more general feeling of unattached apprehension. Generally, sleep is disturbed and nightmares can plague that peace which is found.

This chapter serves to introduce a symposium in which this issue of daily clinical concern is treated within a forum of psychological schools rather than from the perspective of one particular system. To the working clinician this convergent focus on anxiety-based problems has much to commend it; each speaker, in asking a different question about anxiety, both informs and challenges his colleagues and his audience alike, in an atmosphere which guards against complacency in a way that preaching by, with and to the converted often does not.

The present chapter follows the flow of the symposium itself, from adrenal systems to construct systems, and in so doing gives some

indication of the range of language communities existing within the edifice of clinical psychology.

That this edifice is coming to resemble the Tower of Babel is a point made by the finishing speaker, and we make no pretences to fluency in any sort of psychological Esperanto in order to refute this assertion in defence of our profession. Instead, mindful that the reader - like ourselves - may well be more competent in some languages than in others and that most of the papers assume some familiarity with the terminology they use, we intend in this introduction to treat the contributions in their own terms through a sequential exposition of their own terms so that the symposium can be appraised as a whole. This appraisal remains a difficult task for the reader because there is no lingua franca of psychological discourse; the language rules dictated by "explantory" and "understanding" intentions remain quite distinct from one another and this is as evident in the voices heard at a contemporary symposium as it was at the beginning of the century. Thus, in the first three of the papers that follow we can recognize echoes of the native tongue in which the causes of Little Albert's phobia were spoken about, whilst the remaining two more closely resemble the way words were used to convey an understanding of what 'Little Hans's phobia could mean. Although the present contributors might ask more refined questions about Little Albert and Little Hans than did their forebears, that two distinct kinds of question are still being asked is as apparent as ever in their renderings of the cognitive or experiential components of anxiety - each speaker attaches importance to how a situation is perceived but the emphasis shifts decisively after the third presentation when the subjective world of the anxious person becomes the central field of enquiry. This chapter keeps faith with the symposium itself and reflects the shift of emphasis as it occurred.

Let us then begin our introduction to the first three papers with Lang who in 1971 proposed that "emotional behaviors are multiple system responses - verbal-cognitive, motor and physiological events - that interact through interoceptive (neural and hormonal) and exteroceptive channels of communication. All systems are controlled or influenced by brain mechanisms but the level of the important centers of influence (cortical or subcortical, limbic or brainstem) are varied, and the resulting behaviors partially independent." Also in 1971 Van Egeren asserted that "anxiety is usually regarded as a state of a complex system having three major components: a) experiential, b) biological and c) behavioral." Anxiety is now conceptualized in terms of the Three-Systems Model comprising subjective experience or cognitions, overt behavior and physiological changes. In developing theories of anxiety-based problems the contribution of each of these components needs to be considered and understood. However we cannot treat them independently. As Hodgson and Rachman (1974) state: "from a therapeutic point of view it is important to consider the degree of synchrony between experiential, biological and behavioral

systems when assessing the efficacy of a particular treatment method. If theory is to develop we need to ask questions about the possibility of generalization from one system to another and the nature of interactions between response systems in the development and maintenance of specific disorders."

The first three papers in this symposium are concerned with the three components of anxiety and their relevance to anxiety-based problems. The initial paper by Cox and Cox deals exclusively with the physiology of stress and anxiety; the interrelationship with cognitive and behavioral factors however is not, indeed cannot be, ignored.

The important part played by physiological changes in the experience of emotion has long been recognized. The James-Lange theory formulated towards the end of the last century proposes that it is the physiological changes that are primary and determine the emotion experienced. The much greater contribution played by cognitive and behavioral factors is now recognized (Schachter, 1971) and is stressed by Cox and Cox. They begin by briefly reviewing the concept of stress which they treat as a problem solving process combining both psychological and physiological perspectives. Much of the paper is concerned with describing and explaining the key role played by the adrenal glands in the experience of stress in humans. The exact nature of the response of the adrenal systems is recognized as being dependent upon the individual's cognitions and behavior. How a situation is percieved, whether it gives rise to feelings of anxiety or is seen as resulting in loss of status, for example, may determine which Neuro-Endocrine system is triggered: the sympathetic-adrenal medullary system or the pituitary-adrenal cortical system.

They discuss the role of the adrenals in anxiety and depression and also in psychosomatic disease. They also touch on the importance of relaxation training in producing significant, beneficial changes in physiological activity. Since progressive relaxation training was developed by Jacobsen (1938) it has been used in a variety of ways. Not only has it been used as a primary treatment strategy, it has also been used extensively as a component of other treatments, notably systematic desensitization. Both as an independent treatment strategy and as an essential component in systematic desensitization, progressive relaxation has come under attack (e.g. Waters, McDonald and Koresko, 1972). However its efficacy may emerge enhanced. In a comprehensive review of the literature on the physiological effects of progressive relaxation, Borkovac and Sides (1979) identified a number of critical procedural variables. Significant reductions in GSR and heart rate can be obtained if more than six training sessions are used and subjects allowed to proceed through muscle groups at their own rate. Also important is the type of subject used, relaxation being most effective when high levels of physiological activity are assumed to be contributing to the present problem, for example,

in general anxiety patients. Cognitive relaxation designed to produce mental calmness has been tried (Davidson and Hieburt, 1971) with disappointing results. Other forms of relaxation such as meditation are yet to be thoroughly tested as therapeutic tools and the matching of the type of relaxation with mode of presenting symptoms of anxiety (i.e. muscle relaxation for somatic anxiety; meditation for cognitive anxiety) seems a promising approach.

The following two papers, one by Mathews and the other by Baker and McFadyen, represent a merging of cognitive and behavioral theory and practice in arriving at an understanding of how anxiety-based problems are acquired, develop and can be treated. Both begin by announcing their belief in the inadequacy of behavioral theory. For some years the conditioning theory of fear acquisition was influential and undoubtedly made an important contribution to our understanding of phobias. The theory proposes that fears are acquired by conditioning in which neutral stimuli are associated with fear-provoking or pain-producing events so that they develop fearful qualities in themselves. A second stage is then added to the theory to explain the establishment and maintenance of fear by avoidance learning.

Mathews also draws attention to the fact that recent additional concepts may help to overcome some of the inadequacies. The concept of biological preparedness proposed by Seligman (1971) may replace the equipotentiality premise and overcome the problem of the non-random distribution of phobias. Prepared phobias are those that refer to objects of natural importance to the survival of the species. They may be more readily acquired which explains why fear of snakes is more common in Western society than fear of sheep or lambs. For the moment this must be regarded as a useful explanatory concept, the clinical usefulness of which has yet to be demonstrated.

More crucially, Mathews argues that behavioral theory cannot offer a convincing explanation of more complex phobias, such as agoraphobia, or of general anxiety states. However, he points out that the role of conditioning should not be dismissed but that it provides in itself an insufficient explanation.

If conditioning theories cannot provide an adequate explanation for the acquisition and maintenance of anxiety reactions, treatment methods based on these theories are unlikely to be entirely successful. Meichenbaum (1977) eschewed a strict behavioral approach to develop cognitive behavior modification. His work, together with that of Beck (1976), has led to cognitive therapy being widely recognized as a treatment for anxiety states. While there is considerable evidence for the effectiveness of cognitive therapy with minor anxiety problems such as public speaking anxiety (Meichenbaum et al., 1971) there is little evidence as yet to support its effectiveness with clinically presented anxiety reactions. Woodwar and Jones

(1980), using general anxiety patients, compared cognitive restructuring with systematic desensitization and with a combination of the two methods. They found that cognitive restructuring alone did not produce any significant improvement, whereas systematic desensitization and the combined approach did lead to significant improvements which were similar for the two groups of patients. Emmelkamp et al. (1978) found that exposure treatment for agoraphobia had significantly greater effect than cognitive restructuring; although in a later study (Emmelkamp, 1979) the cognitive restructuring group continued to improve during follow-up and 'caught up' the exposure group.

It can be seen, therefore, that studies reported so far do not provide very encouraging results for the use of cognitive methods of treatment with clinical anxiety problems. Continued use and further investigation of cognitive methods should eventually lead, as with relaxation, to an identification of procedural variables that maximise effectiveness. A further possible reason for results is that therapists have enthusiastically applied cognitive methods in the treatment of agoraphobia and general anxiety without being able to relate that treatment to a properly developed cognitive theory of how these problems arise. The latter part of Mathew's paper is devoted to outlining a model of anxiety reactions which relies heavily on cognitive processes but also accommodates existing behavioral theories. This leads to recommendations for treatment. Although he suggests that there is nothing new in these recommendations, they at least allow a more rational approach to the selection and application of existing cognitive and behavioural techniques.

Baker and Mcfadyen regard behavioral theories as providing a too restricted and over-simplified view of anxiety-based problems. They argue that cognitvie processes play an all important part and put forward a cognitive model of exposure treatment. According to their model it is the individual's cognitive appraisal of a panic attack, which may arrear to have occurred spontaneously, that determines what form of anxiety reaction - agoraphobia or general anxiety state - develops. Exposure treatment, it is suggested, is effective in that it enables invalidation of these mistaken appraisals to take place. They are therefore not proposing a new form of treatment of anxiety problems but putting forward a model of how an existing and effective behavioral procedure works. As in Mathews' model, promising ideas for treatment do arise, in this case concerning a more precise application of exposure treatment. Also, like Mathews, panic attacks and reactions to panic are seen as central features of agoraphobia and general anxiety both in terms of understanding their acquisition and development and as a focus for treatment.

It was beyond the scope of these papers to look in depth at the setting conditions in which anxiety occurs and then becomes manifest in the form of panic attacks. This theme is touched upon however: Cox and Cox regard stress as a process of interaction between an

individual and environmental conditions, Baker and McFadyen refer to "a precipitating stressor or stressors" and Mathews to "background stress arising from life events." These acknowledgements indicate the importance of social and environmental factors in the precipitation of anxiety reactions; they are also important in the maintenance of these reactions. There is a growing weight of evidence demonstrating that interpersonal variables are important in determining treatment outcome for agoraphobic patients. Thomas-Peter et al. (1983) identified the ability of agoraphobic's partners to act as "managers of agoraphobia behavior" as an important variable in treatment success. Hafner and Ross (1983) suggest that husbands of a agoraphobics must be able to acknowledge the impact of rapid and substantial improvement in their wives if improvement is to continue during follow-up. In both studies the involvement of partners in therapy is recommended. Milton and Hafner (1979) found that marital dissatisfaction was associated with poor outcome of treatment by in vivo exposure.

Interpersonal conflict is considered an aetiological factor in an analysis of agoraphobia by Goldstein and Chambless (1978). They suggest that feelings of distress resulting from interpersonal conflict may be wrongly attributed to external circumstances. This takes us back to cognitive theories of acquisition and serves to illustrate the very complex nature of anxiety reactions. Not only do we need to conceptualize anxiety reactions in terms of the Three-Systems Model, but also to place the individual's reaction within a social and environmental framework. Treatment too has to take these factors into account. It is appropriate for the focus of treatment to be a reduction of panic attacks and avoidance behavior by cognitive and behavioral methods, but this has to be carried out with due awareness of the potential contribution being made to the anxiety reaction by, for example, interpersonal conflict, secondary gain and even, as suggested by Hafner (1977), opposition to treatment by the patient's spouse.

Dr. Bannister opens his paper on Kelly's personal construct view of anxiety by observing that "the language of psychology is a semantically fearsome thing." Although Dr. Sedlak's contribution will be considered before his, Dr. Bannister's statement is introduced here as a portent of an impending confusion of tongues as the symposium moves from a tripartite conversation in the physiological, behavioral and cognitive modes of expression, where at least some fraternal understanding is possible, to the altogether different locations of psychoanaylsis. Dr. Bannister's views have a fittingly cautionary place at the end of the symposium and are discussed below. However, they are anticipated in the following words from an introductory text on anxiety, which also serve to preface Dr. Sedlak's presentation, "all theories, whether hypothetico-deductive or informal, are nothing more than particular versions of the theorist's own experience.... coded, and moulded by specific, a priori, metaphysical commitments as to the nature of reality" (Fischer, 1970).

Psychoanalysis was the result of Freud's attempts to integrate and articulate his rich experience of being alone and being with others into an intelligible theory that satisfied the scientific establishment of his time - the mechanistic and materialistic ideal of the "exact science" to which Freud himself aspired in this commitment to the nature of reality. In this vein he originally presented anxiety as the result of a blockage of sexual needs, this repressed libido being transformed into and expressed as a state of anxiety in the best tradition of Newtonian mechanics. This mechanistic formulation, like others in this metapsychology, was shaped by the way that formal theory-building was done at the time. However, the data from which the formulations were derived came from interpretation; that is, his working material was the meaning of his patients' symptoms. Freud's thought draws upon an interplay between mechanism and meaning, sometimes emphasizing one element and sometimes the other. In his later theory of anxiety there was a definite shift away from the libidinal hydraulics to a view of the experience of the individuals when anxious. In this second theory, found in "Inhibitions, Symptoms and Anxiety" (1926), his concern with the economics of a closed energy system, whilst still maintained, was not the source of the new formulation; indeed the two new kinds of anxiety 'primary' and 'signal' with which he replaced the original idea of libidinal discharge, were not even libidinal. Instead he described dreadful infantile situations to which anxiety is an appropriate response given their real or imagined dangerousness. These anxiety-producing situations are the loss of the loved person, the loss of the loved person's love, castration fears and the crushing superego attack.

Modern writers would no doubt extend this list, but Freud was content with these four and believed their prototype to be the infantile catastrophy of total helplessness, what he called 'primary anxiety'. In his 1926 theory he distinguished between dread of being overwhelmed and a second type of anxiety that warns of impending dangers that are not yet overwhelming, in order that steps might be taken to avoid them. This notion of anxiety as a warning device for avoiding primary anxiety helped to refine his formulations on defence mechanisms beyond simple repression, and it shed a new light on symptom formation. He called this second kind of experience 'signal anxiety'. This is a thoroughly psychological concept, unlike the mechanistic notion of transformed libido, as it concerns the meaning the person gives to his or her world, for it is the person who interprets certain situations as dangerous, who is on the lookout for them, who is especially sensitive to cues about them, who anticipates them and who initiated defensive ways of avoiding them and their painful consequences. This anxiety arises in response to an environmental stimulus that symbolises an occasion for the emergence into consciousness of some distressing aspect of one's inner life that cannot be accepted or contemplated, so that something can be done to avoid this impending danger. Indeed 'doing something' often appears to be lived and thought through; confrontation with the

unthinkable is frequently averted through action. It is worth considering here, perhaps, that nuclear war has been called the Unthinkable and worth considering too that it is a danger situation writ large, for not only does its prospect evoke reality-anxiety about an external threat but also, symbolically, an inner infantile dread of annihilation. Perhaps this is why, in part at least, so many of us prefer to support the action of building up our nuclear arsenals rather than think about the unthinkable.

It is with defensive 'acting out', our taking action as an avoidance technique, that Dr. Sedlak is concerned in his paper "A Psychodynamic Perspective on Anxiety." In it he attempts to introduce to a general audience the particular contribution of psychoanalysis to the study of anxiety. This is that anxiety serves as a signal warning of the possibility of some other emotional state, such as dread, which one cannot contemplate. This approach stresses the importance of understanding the nature and meaning of anxiety in relation not only to the danger perceived outside, in a phobia for example, but also to the internal state that is feared symbolically as an external, for example, phobic stimulus. His exposition provides an excellent introductory account in that it uses a minimum of theory; instead, the thesis arises from and comes to life with the kind of clinical illustration that demonstrated it. In a practical way he shows that the fear has to be defended against in psychopathology because of an inadequate ability to master it through thought and reality testing (usually known as low ego strength). He then goes on to indicate how change can be effected through the therapeutic relationship by the therapist working with the patient to help him or her to become aware of the hidden fears, thus acting as an 'auxiliary ego' which is eventually internalized and made inwardly available to the patient.

However, it is our own conflicts as helping professionals more than those of our patients that Dr. Sedlak uses the value of making the unconsciously feared the consciously pondered. Using three all too familiar clinical vignettes he conveys the extent of the damage done to sound judgement by precipitous action. He shows clearly how acting out 'short circuits' the anxiety that signals a personally threatening experience work, and how much more fruitful it might have been on each occasion to mull over the meaning of the danger situation. Dr. Sedlak's psychodynamic perspective on anxiety is about meaning, not causes, and therefore its language is that for seeking understanding in the practical setting rather than for the discovery of mechanistic processes useful in scientific theory-building. That psychoanalysis is essentially a semantic theory has been cogently argued by Rycroft (1966) and others and, like most psychodynamic at work in their consulting rooms, Dr. Sedlak's views draw upon this semantic spirit of Freud's inquiry more than his covering letter of metapsychology.

However, it was with the formal abstractions of classical psychoanalytic metapsychology that the young George Kelly struggled before the Second World War. Like Carl Rogers, but unlike most other pioneers of the post-Freudian psychologies in America, Kelly was not entangled in personal ties to Freud and his European heirs; on the contrary he seems to have been rather isolated intellectually, with his knowledge of psychoanalysis coming only from the books he read. The 'hydraulic' explanations of human conduct he found in them were not conspicuously edifying and he was later equally unconvinced that the S-R laws of the opposition accounted for much either - apparently it was the hyphen between the S and the R that baffled him. His misgivings about these renderings of human activity, be this anxious or otherwise, are understandable in the context of his "metaphysical commitments as to the nature of reality" (q.v. Fischer, 1970) and few psychologists have stated their metaphysical assumptions as clearly as Kelly did, most notably in "A Brief Introduction to Personal Construct Theory" (1970) where he asserted that "whatever nature may be, or howsoever the quest for truth will turn out in the end, the events we face today are subject to as great variety of constructions as our wits will enable us contrive" (p.1). He came to call this position "constructive alternativism" which he contrasted with the "accumulative fragmentalism" of those who are searching for bits of truth (about, say, primary process thinking or reinforcement schedules) which correspond directly to a reality waiting to be disclosed by just such a piecemeal undertaking, as though the accumulated fragments of the jigsaw will one day fit together and all will be revealed. This is not a fruitful way of conducting human inquiry in Kelly's view for "since ultimate truth is such a long way off, it seems as inappropriate to try to capture it by, say, five o'clock on Tuesday as it is to claim we already have it in our grasp" (p.5 ibid). Instead, Kelly considers the theory-builder as a person trying his or her world and in doing so he endows subjects and patients with the same theory-building capacities as their experimenters and therapists in order to conduct his inquiry, which is one into human inquiry itself.

From this metaperspective everyone is viewed as an incipient scientist trying to make sense of the world, as he or she goes along, by making predictions, assessing their outcomes and revising assumptions accordingly. Thus, the individual is no prisoner in a past of infantile sexuality or reinforcement contingencies but "man the scientist" searching for meaning by reaching out to the future. This model of man is not simply an expression of Kelly's optimism, it is an expression of a complete, fertile and formally stated metatheory of human understanding, the fundamental postulate of which is that a person's processes are psychologically channelized by the ways in which he or she anticipates events. The assumptions of constructive alternativism are densely encoded in these few chosen words. Thus it is a statement about man the person which in no way denies the value of what can be said, say, by biologists and chemists about man the

organism; it is simply that there is no commitment to using the man-made constructions of these non-psychological disciplines. Moreover, the construct approach is further distinguished within its fundamental postulate from most other psychological theories in its attention to the ways that processes are channelized. The basic assumption here is that the processes that express a personality are always in motion so there is no need in a psychological theory to invoke forces pushing or pulling the person along. One of the few people left undifferented from construct theory by its basic principle would be Rogers, and he falls by the wayside as the self moving person is said to anticipate events. According to constructive alternativism, events are interpreted, rather than responded to, and the only outside check on how useful an interpretation is for making sense of the world are the events that confirm or disconfirm the means by which they were anticipated. To elaborate fully the formal content of Personal Construct Theory is beyond the scope of this paper as each of the eleven corollaries inferred from the fundamental postulate would need to be presented (see Kelly, ibid). For present purposes it must suffice to say that they introduce and refine the "construct" as the basic bipolar schema for the anticipation of a finite range of events, unique to the individual and part of an interrelated but not logically intact system which he or she has evolved for anticipating the promise of further elaboration. The system is constructively revised within its own limitations in the light of the consequences of having invested in certain anticipation, that is, it changes with the experiential cycle of successively construing and reconstruing as events unfold.

When this system is only sufficiently elaborated to the point of allowing the recognition that it cannot deal with the events at hand, the individual becomes anxious. He or she can only partially construe their unfolding and cannot anticipate their outcome with any confidence at all. Thus, Kelly defines anxiety as an aspect of change without recourse to the traditional emotion-cognition dichotomy that Dr. Bannister, when he tries to tie down 'The Free Floating Concept of Anxiety', regards as an import from lay culture. This he says has resulted in a proliferation of fragmented psychologies seeking to explain anxiety, rather than a unitary one, like Kelly's, with which one can seek what anxiety explains. Dr. Bannister argues that redefining anxiety as a construct relation to transition leads to a consideration of further definitions, within the same theoretical framework, for a range of reactions to anxiety such as the dimension of constriction-dilation. These, being constructs about constructs, allow one to appreciate the ambiguity of the anxious person's situation without disconnecting the anxiety from his or her phenomenological world by resorting to a hydraulic behavioral or psychodynamic force. However, although the second of these two propulsive entities can be viewed from Kelly's unitary perspective as an essentially non-psychological and mechanistic facet of that monument to accumlative fragmentalism which is Freud's classical causal

theory, when Dr. Bannister comes to speak about therapy rather than the relative merits of competing theories he is led to conclusions which would not look out of place in Dr. Sedlak's paper.

Just as Dr. Bannister describes anxiety in terms of the awareness of the limitations of one's personal interpretative capacity, Dr. Sedlak speaks of it in terms of the awareness of that which one does not have the capacity to give thought to; in short, each is saying that anxiety is about something. Each seeks to understand the personal reasons for anxiety rather than its external causes and each regards exclusive attention to the latter as endorsing one's patients', and one's own constrictive (Bannister) or defensive (Sedlak) strategies. To claim that the working language of psychoanalysis deals with personified causes is to gloss over the lasting impact of Rycroft and other influential writers in America and Europe who, from within the psychoanalytic tradition, have gone 'back to Frued' in their different ways to criticise the natural-science model of his causal theory in order to recast it in the working language of its actual practice, the language of meaning, Thus, whilst each person described by Dr. Sedlak is anxious about something, can it be said that the something is a hydraulic manifestation of some autonomous impersonal 'force'? It cannot. The danger situations he writes about are the ordinary human concerns of closeness, irritation, weakness and fear, none of which are explained scientifically but are shown to be potential occasions for creating meaning through the semantic procedures of the psychoanalytic approach.

That these procedures differ from those of Kelly is obvious enough. Nevertheless the difference here is less marked than at the level of meta-theory; for whilst the debate between high levels of abstraction is more than just a paper war - because theories must imply values - the two models share values and therefore similar therapeutic attitudes and aims inform their dissimilar ways of pursuing these aims. Thus, whilst constriction and defence are quite different theoretical concepts, in practice they are subject to the same implicit question - what is the strategy for, what purpose does it serve in maintaining a sense of integration and security? To the patient, anxiety is seen as a threat to this status quo, as something alien; to the therapist, it is seen an an augury of change in the phenomonological world the patient has built up, as something that can be rendered intelligible. The personal construct therapist and the psychodynamic therapist have developed different contexts of meaning within the patient can be helped to possess the anxiety, rather than be possessed by it, but these contrasting techniques flow from the same respect for the patient's personal agency. Of course, cognitive and behavioral therapists respect the person in theory and practice, that is not an issue, nor do they overlook the phenomenology of anxiety reactions and the ways in which these are interpreted; it is just that they portray anxiety in causal rather than intentional figures of speech and help the patient to be rid of it rather than to make sense of it.

Perhaps when Dr. Bannister asserts that anxiety can be both disruptive and informative, all his fellow speakers would concur with him in his first designation but only Dr. Sedlak with his second one, as it reflects the attitudes and aims of his own therapeutic medium if not its interpretative messages.

In conclusion to this introduction to the five papers which make up this section "Approaches to Anxiety Based Problems", a final thought on semasiology which might ease acceptance of disparate tongues.

> "The question is," said Alice, "Whether you can make words mean so many different things."
> "The question is", said Humpty Dumpty, "which is to be master - that's all." (Carroll 1872).

Perhaps, unlike Alice, we can tolerate and contain the ambiguity of words, and, unlike, Humpty, we can respect and accomodate those whose language differs from our own. In this way, through a process of 'cross-cultural exchange', we leave open the possibility, not of melting-pot eclecticism, but of an enrichment of our own theoretical tradition. We may even find ourselves glimpsing something which lies beyond our own personal looking-glass.

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THE ROLE OF THE ADRENALS IN THE PSYCHOPHYSIOLOGY OF STRESS

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ABSTRACT

Over the last two decades, steady progress has been made in the development of stress theory, both in terms of our understanding of the psychological and social characteristics of situations which elicit the experience of stress, and in terms of the psychophysiological mechanisms which underpin the response to stress and attempts to cope with it.

Much interest in psychophysiology has focused on the role and control of activity in two particular neuroendocrine systems: the sympathetic-adrenal medullary system and the pituitary-adrenal cortical system. These systems, and their associated hormones, appear to be related to patterns of behavior, which are old in evolutionary terms, and which are controlled by separate and distinct psychosocial stimuli. Furthermore, the neurophysiological loci of control for the two systems appear to reside in separate but interacting areas of the limbic system.

This paper briefly considers the psychophysiology of stress in this context, and speculates on the possible implications of the proposed model for psychological and physical well-being.

INTRODUCTION

In 1975, Lumsden wrote that the concept of stress was "one of the most significant and integrative concepts ever developed in the social and biomedical sciences," and that, "its potential as a prime intellectual tool for not only understanding, but also explaining,

individual and collective human behavior and disorders has not yet been fully realised." Whether this is true or not, the concept has certainly gained much popularity, not only within research and clinical practice, but also with the media and public at large. While undoubtedly stimulating endeavor, this has posed a problem, for much of the popular treatment of the subject has been superficial to the point of inaccuracy, and has cast a shadow over more serious and more detailed studies. Within the scientific arena, the concept of stress has been widely used in a variety of different disciplines and contexts. As a result a multiplicity of definitions and methodologies, theories and models have arisen, and there is no easy agreement when a precise scientific definition is required.

However several "like thinking" authors have presented reviews of the literature on stress and attempted to describe and compare the different models and approaches which exist (Appley and Trumbull, 1979; McGarth, 1970; Lazarus, 1966; Cox, 1978; Laux and Vossel, 1980; Cox and Mackay, 1981).

The simplest definitions are those that have been termed the stimulus-based (beloved of engineers) and the response-based (favored by clinical practitioners and physiologists). The former treats and measures "stress" as some noxious or aversive characteristic of the person's environment, for example, in terms of temperature (excessive heat or cold), as sound pressure level (excessive noise), as hours or restraint (animal studies), or as speed of machine-pace work. Conversely, and largely following on from the work of Selye (1950), the response-based approach defines and measures stress in terms of the non-specific elements of the (physiological) response to noxious or aversive stimuli. For a variety of reasons, these approaches have been seen as inadequate by most psychologists, who advanced more interactive models. These have tended to focus on the person's dynamic relationship with their environment, and to emphasize the critical importance of perceptual-cognitive processes and of individual differences (e.g. Lazarus, 2966). Several models of stress now treat it, not as "stimulus" or "response", but as a process. The process is that which describes the way in which the person realizes and identifies her/his problems, how they react to them and attempt to cope with them, and the "cost" of doing so. Such models usually combine social psychological and psychophysiological perspectives, and attempt to identify the structural characteristics of problems in terms of the demands made on the person, the support and resources made available for coping (or problem-solving), and the constraints on coping. Generally, situations involving high demand and high constraint, but involving poor problem-solving resources or low support are perceived and reported as aversive or problematic. These are often associated with the sort of changes in behavior and in physiological state that have been taken as diagnostic of stress. The exact nature of the these physiological changes depends to a large extent on the individual's cognitive responses and behavior.

This is discussed below. The term "stress" is thus to be treated as an economic descriptor of a particular problem-orientated process (Cox, 1983).

The Physiology of Stress

Physiological interest in "stress" can be traced back through early pioneering work of Cannon (1929) and Selye (1959), and has tended to focus, until recently, on two neuroendocrine systems: the sympathetic-adrenal medullary system, and the pituitary-adrenal cortical system. The adrenal glands have thus been central to discussions of "stress" physiology and theory (e.g. Henry, 1982), as has the function of certain of their associated hormones: adrenaline and noradrenaline, and cortisol. This is not to say that other neuroendocrine systems, or hormones, such as the vagal-insulin system, the hypathalamic-gonadotropic axis or the oestrogens, are not important in this respect. It is simply that our understanding of the first two named systems is more advanced through greater research effort.

The Nature and Measurement of Adrenal Function

The adrenal glands, or some corresponding organ, are present in variables form in all vertebrate classes from cyclostomes to mammals. In mammals, the paired glands occupy positions immediately superior to the kidneys, although there are extra-adrenal sites in the body at which both cortical and medullary tissue can be found.

There are two endocrine systems present in the adrenal glands: the outer cortex which secretes steroids, including cortisol, and the inner medulla which secretes the catecholamines, adrenaline and, to a lesser extent, noradrenaline. These two systems appear functionally separate. Secretion of the catecholamines from the medulla is controlled by activity in the sympathetic nervous systems, while secretion of the steroids by the cortex is controlled by the level of adrenocorticotrophic hormones (ACTH), and other chemicals in the blood. The differences in the nature of the control mechanisms have an embryological origin. The cortex is formed from the mesodermal layer in close association with the developing gonads. The medulla, by contrast, is neuro-ectodermal tissue and differentiates from the neural crest cells along with the sympathetic ganglia.

The cortex is essential for the maintenance of life, while the medulla is not: demedullated animals can survive quite well under sheltered conditions. Although cortical cells are particularly susceptible to injury they have a marked capacity for regeneration, unlike medullary cells, which like much neural tissue, show minimal regeneration.

The chromaffin cells of the medulla are modified ganglion cells: histochemical evidence shows the presence of two different types of cell, which elaborate either adrenaline or noradrenaline. The ratio of adrenaline to noradrenaline secreted by the medulla varies from species to species: in man about ten times more adrenaline is released than noradrenaline. Despite this, the measured levels of adrenaline in both plasma and urine are lower than those of noradrenaline, this being due to the additional secretion of noradrenaline by the sympathetic nerve endings.

Initially, the catecholamines were measured in both plasma and urine through the use of bioassay, but this method tended to be both time consuming and unreliable and was replaced by a variety of fluorimetric techniques. The development of fluorimetric techniques (e.g. Jenner et al., 1979) enabled researchers to obtain more accurate data, provided that the control of the conditions of sampling and analysis was adequate (see Cox, et al., 1983). However, recent advances in physical and computer-aided chemistry have now made the measurement of catecholamines both easier and more reliable; the most recent research tends to use high pressure liquid chromatographic separation techniques and fluorescence or electrochemical detection, or radioenzymatic techniques.

The adrenal cortex is composed of three discrete cellular regions: the zona reticularis, the zona fasciculata, and the zona glomerulosa. These regions produce three different groups of steroid hormones: the mineralocorticoids, the androgens, and the gloucocorticoids. In humans, 85% of the glucocorticoid secretion is cortisol, the remainder being predominantly corticosterone.

Adrenal cortical activity has been measured in various ways: through urine levels of the corticosteroid metabolite, 17-hydroxycorticosteroid, or through plasma levels of both cortisol and ACTH: very little cortisol or corticosterone is excreted in the urine. Methods for the assay of corticosteroids and related chemicals have become both diverse and sophisticated over the past decade. They now include gas chromatography, colorimetric and fluorescence techniques, and perhaps most reliable of all, radio-immuno assay.

The Physiological Function of the Adrenals

The physiological effects of the catecholamines are ubiquitous, but generally involve cardio-circulatory and metabolic effects similar to those occurring at the beginning of exercise. The main effects of adrenaline are the mobilization of glucose as a source of energy, and an increase in heart rate and cardiac output. Noradrenaline, by contrast, is a more potent vasoconstrictor, and is particularly important in the maintenance of blood pressure through changes in peripheral resistance. Increased blood pressure may serve, in

turn, to decrease heart rate. Both hormones accelerate the rate and increase the depth of respiration, and both affect smooth muscle.

Increased levels of cortisol (and corticosterone) also have a major effect on carbohydrate metabolism, bringing about an increased production of glucose from tissue protein (gluconeogenesis), an increased deposition of glycogen in the liver and depression of fat synthesis from carbohydrate. The glucocorticoids also enhance the release of free fatty acids from adipose tissue and facilitate the absorption of insoluble fats through the stomach lining. The metabolic effects of the glucocorticoids are essentially catabolic, bringing about the release of energy, possibly for coping. In this respect they share a common property with, at least, adrenaline. Furthermore, cortisol (and corticosterone) can enhance and maintain vascular reactivity to the catecholamines and thus bring about minor increases in blood pressure. The glucocorticoids may also influence the metabolism of the catecholamines.

Considerable attention has been recently paid to the effects of pituitary - adrenal cortical activity on the immune system (Cox and Mackay, 1982). Increased levels of glucocorticoids have been shown to produce a redistribution of leucocytes and leucopenia, thymus involution, and loss of tissue mass from the spleen and lymph nodes. These changes can affect T and B cell activity, and that of NK cells and the thymic components, overall reducing immune competence and possibly allowing tumor growth. A series of studies on mice carried out by Riley (1981) have demonstrated these effects. He has shown that exposure to non-traumatic stressors, such as rotation, can cause increases in plasma corticosterone, leucopenia, reduction in thymus weight, and the promotion of implanted tumors. Furthermore he has also shown that the administration of corticosterone can promote the growth of implanted tumors and reduce thymus weight. These findings are generally consistent with earlier research (e.g. Amkraut and Solomon, 1975; Rasmussen, 1969). Rasmussen has, for example, shown that daily exposure to avoidance learning in rats significantly increased susceptibility to herpes simplex virus, poliomyelitis virus, Coxsackie B virus and polyma virus. The suppression of the immune response appeared related to an elevation of levels of plasma corticosteroids

The Behavioral Function of the Adrenals

Two evolutionary old and well described patterns of coping behavior appear associated, in social mammals, with the two endocrine systems under discussion (McQueen and Siegrist, 1982). The flight-or-fight response appears to be under control of the amygdaloid complex, and to be related to sympathetic-adrenal medullary function, while the conservation-withdrawal response, somewhat by contrast, is under the control of the hippocampal complex, and related to

pituitary- adrenal cortical function. Conservation-withdrawal has been associated with passive coping in situations eliciting helplessness or involving powerlessness (see later).

Henry (1982) has described these relationships in terms of a two-dimensional model of the endocrine response to stress onto which he has mapped the situational determinants of these behaviors.

The Sympathetic-Adrenal Medullary System

The behavioral function of the sympathetic-adrenal medullary system was first explored by Cannon (1929), who described the flight-or-fight response in cats under threat. Increased activity in the system was thought to prepare the body for the action inherent in those behavioral responses, and to facilitate rapid powerful and sustained coping. Flight-or-fight appears to be elicited when an animal is threatened or its power to control access to important objects is challenged. However, it may only occur when it is perceived that a response is feasible and the threat or challenge can be met by effective action. Flight-or-fight-have also been described as defensive aggression and escape behavior(Gray,1971; Cox, 1978).

Central Control of the Flight-or-Fight Response

The relatively early research of Kling and his colleagues (Kling and Hutt, 1958) suggested a role for the amygdaloid complex in the control of this behavior. Lesions in the amygdala were shown to make cats docile, while further lesions in the ventromedial hypothalamus (VMH) produced ferociousness. Cats made ferocious by lesions in the VMH could not be calmed by further lesions in the amygdala. Damage to the septal area was shown to produce a syndrome of "hyper-irritability" involving exaggerated aggression, increased startle responses, increased defaecation, and increased resistance to capture. This syndrome of septal hyper-irritability could be prevented by prior lesions in the amygdala. In a review of the evidence available in the early 1960's, Goddard (1964) concluded that the majority of studies showed that lesions in the amygdala produced tameness (and hypersexuality). Perhaps one of the most interesting demonstrations of this taming effect was that provided by Schreiner and Kling (1953). They tamed a mountain-lion by removal of the amygdala, leaving it free to roam the laboratory like a domesticated cat. Despite the weight of evidence in favor of this taming effect there have been a small but significant number of studies suggesting that lesions in the amygdala can produce the opposite reaction (rage and hyposexuality). However, many of these contradictory studies may have produced their effects through damage to areas of the brain other than the amygdala, possibly the hippocampus.

More recent studies by Kling and Steklis (Kling and Steklis, 1976; Kling, Deutsch and Steklis, 1977) on affilative and grooming behavior in primates have suggested a further role for the amygdala, this time in the control of patterns of more "relaxed" activity.

An early model of Gray's (1971) may serve to integrate these various findings. He has suggested that the control of stress-related behavior may involve limbic and associated structures. The midbrain central grey matter, he believes, decides between escape behavior (flight) and defensive aggression (fight) in the active response of the animal to stress. Passive responses are produced through the inhibition of the midbrain central grey matter by activity in the ventromedial hypothalamus. Ventromedial hypothalamus function, in turn, is enhanced by activity in the septal-hippocampal system and inhibited by activity in the amygdaloid complex. The former thus acts as a STOP system,and is associated with passive coping, while the latter has a role in the control of the flight-or-fight response. The outcome of these two influences is decided by which system has the stronger input to the VMH. Gray's (1971) model can thus explain the data presented by Kling and his colleagues, although the status and control of relaxed behavior in this model requires further examination.

Flight-or-fight and the Catecholamines

There is some evidence that the components of the flight-or-fight response may be under the control of different areas of the amygdala, and may be differentially associated with the catecholamines. For example, a study by Stock and his colleagues (1978) examined the behavioral and physiological effects of stimulation of different areas of the amygdala in unrestrained cats. Stimulation of the basal portion of the amygdala elicited defensive postures and behavior, with flattening of the cats ears, hissing and retraction of the head. These effects were associated with adrenaline-like changes in cardiovascular activity: vasodilation and a modest increase in heart rate and blood pressure. By contrast, stimulation of the central portion of the amygdala elicited a posture preparatory to attack, with no flattening of the ears. Changes in cardiovascular activity were more noredrenergic in character: a sharp increase in blood pressure, heart rate, and peripheral resistance

The suggestion that there may be a differential association of the catecholamines with behavior is echoed in much of the literature, although no clear description of their different roles has yet been agreed. It is not the case that one or other of the hormones is released in response to particular situations, but rather that the ratio or balance during secretion is altered. Several behavioral dimensions have been suggested to discriminate between the activities of the two hormones: passive - active coping (e.g. Elmadjian et al.,

1958); fear - anger (e.g. Funkenstein, 1956); or psychological - physical response (Dimsdale and Moss, 1980a and b; S. Cox et al., 1082). Consider the following two examples. Dimsdale and Moss (1980b) studied plasma catecholamine levels using a nonobtrusive blood withdraw pump, and redioenzymatic assay. They looked at ten young physicians engaged in public speaking, and found that although both adrenaline and noradrenaline increased in this setting, the levels of adrenaline appeared far more sensitive. They associated this response with the feelings of "emotional arousal" which occurred during public speaking. Somewhat in the same vein, the present authors (S. Cox et al., 1982) investigated the effects of short cycle repetitive work on urinary catecholamine excretion rated using an adaptation of Diamant and Byer's (1975) analysis. They found that both hormones were sensitive to various features of this type of work (pay scheme, pacing etc), but differentially so. It was suggested that noradrenaline levels were related to the physical activity inherent in the task, and to the constraints and frustrations present. By contrast, adrenaline levels appeared related to feelings of increased effort and stress. In conclusion, noradrenaline is usually associated with the more active and aggressive response pattern. Henry (1982) implies that the behavioral correlates of noradrenergic function are characterized by anger and defensive aggression (fight). d By contrast, adrenergic function appears to be characterized by anxiety and escape (flight). Psychosocial situations which produce such experiences and behaviors would appear to trigger, or regulate, activity in the sympathetic adrenal medullary system.

Parasympathetic Function

While much attention has been paid to the control and behavioral significance of the sympathetic-adrenal medullary system, relatively little attention has been paid to the parasympathetic nervous system. However, research into the structure and effectiveness of relaxation training has begun to correct this imbalance.

There is now much evidence to show that various forms of relaxation training can produce significant changes in physiological activity, some of which may have long term implications for health (Benson, 1975; Patel, 1981). These changes characteristically involve a reduction in systolic and diastolic blood pressure, in heart rate, and in self-reported arousal (Cork and Cox,1982), with linked changes in respiration and blood lactate (Benson, 1975). Other physiological and behavioral effects have been described: a decreased need for medication and use of cigarettes (Patel, 1975, 1981), reduction in dopamine B hydroxylase (Stone and De Leo., 1976; Cooper and Aygen, 1979), and decreased blood cholesterol (Patel, 1981). This pattern of change has been described as a wakeful hypometabolic state of low arousal, and appears to be at least partly controlled by changes in vagal activity (Henry, 1982). This possibly describes part of Hess's (1957) classic trophotropic system.

As a result of recent research in this area, the SAM axis in Henry's (1982) model may be better represented as a bipolar autonomic axis, with one pole representing sympathetic adrenal medullary activity, and differentiating between noradrenergic and adrenergic influences, and with the other pole representing (vagal) activity. The corresponding behavioral dimension would be characterized by the expenditure of effort and by relaxation, relaxation being more than just a lack of effort.

The Behavioral Function of the Pituitary-Adrenal Cortical System

Situations which involve loss of status or power appear to be associated with the increased secretion of cortisol (Henry, 1982); for example, adrenal cortical activity is increased in the rejected consort (Sassenrath, 1970), in the lost infant monkey (Smotherman et al., 1979), and in the immobilized rat (Mikylaj and Mitro, 1973). Furthermore, experimental situations involving a degree of uncertainty or low predictability also elicit increased cortisol secretion (Coover et al., 1973; Weinberg and Levine, 1980). Such situations tend to involve a low degree of control. There is good evidence for the sensitivity of this response (Hennessy et al., 1979).

Clinical studies have associated changes in cortisol secretion with depression. The reliability with which depressed persons fail to suppress plasma cortisol after dexamethasone administration (e.g. Carroll et al., 1976) is so high that a positive test is accepted as evidence when depression is suspected (Schlesser et al., 1980). The changes in cortisol activity which occur include increased secretion with increased episodes of secretion, increased periods of active secretion and disruption of normal circadian patterns (Sachar, 1980).

Henry (1982) has linked the common elements in these lines of evidence to the loss of control and to helplessness (Seligman, 1975).

The pituitary - adrenal cortical system appears to be partly under the control of the hippocampus (Henry and Stephens, 1977; Henry and Meehan, 1981), and thus possibly associated with cognitive mapping, general and social learning and memory (O'Keefe and Dostrovsky, 1971; Sinnamon et al., 1978; Ely et al., 1977). More direct evidence of a role for the pituitary-adrenal cortical system in learning comes from psycho-pharmacological studies on the effects of ACTH and cortisol. Brain and Poole (1974), for example, have described the effects of the ACTH - cortisol mechanism in enhancing the acquisition of conditioned avoidance behavior. However, such effects on learning behavior may be largely due to ACTH, and the action of this endocrine may be extra-adrenal.

The "loser" in situations involving conflict and loss of status show increased pituitary-adrenal cortical system activity and, in

evolutionary terms, this may be adaptive. The "loser" is freed by ACTH to learn new patterns of behavior (coping) more rapidly. There is now some evidence for this effect as Krieger and Martin (1981) point out in their recent review of brain peptides. The "winner", however, may show a relative inflexibility in their behavior, and therein the seeds may be laid for later defeat.

Situations which involve mastery or the gaining of control, or where events become predictable, may be associated with decreased cortisol secretion. Mandell (1980) has recently discussed the circumstances surrounding "elation", and has linked the experience of this pleasure to activity in the septal-hippocampal system under the control of situations involving status enhancement, with their implications for security and control.

Integrated Research into the Behavioral Function of the Adrenals

Over the last decade or so several studies have looked at the relationship between adrenal medullary and cortical responses. It has been argued throughout this paper that they are differentiated both in terms of the situations which elicit them, and the behaviors which they accompany. Despite this, the overall endocrine response to stress must be part of an integrated mechanism (Mason, 1968). One popular line of work has involved the coronary prone (type A) behavior pattern. Type A's have been characterized as hard-driving and competitive, time-conscious and job-involved (Zyzanski and Jenkins, 1970). Their behavior is domineering and aggressive, while that of their opposities, type B's, tend to be passive and subordinate. Friedman and his colleagues (1969) have shown that type A's, who secrete more catecholamines than type B's, also secret less cortisol when challenged with ACTH. Furthermore, several studies by Frankenhaeuser, Lundberg and Forsman (see Lundberg, 1982) have shown that increased effort and interest, particularly in achievement situations characterized by good control, are associated with increased sympathetic-adrenal medullary activity and suppression of the pituitary-adrenal cortical system.

Normal Function and Pathology

Activity in many physiological systems is controlled by homeostatic 'feedback' mechanisms which are set to maintain optimal levels. However, it has been suggested that "over-rides" exist in response to certain situations, and that the repeated over-riding of normal function may lead to pathophysiological changes. Furthermore, the attempted control of extreme or aversive conditions, however they have arisen, may also contribute to the aetiology or prognosis of disorder.

For example, it has been concluded by the authors (Cox et al., 1982) that the risk of certain types of disorder is increased in some workers exposed to repetitive work practices. It is clear, however that certain of these health effects are directly associated with the physical demands of the work (locomotor and postural) and with the design of the work environment. However, such explanations cannot account for all the effects observed, and must be considered alongside the sort of psychophysiological approach described here. It has been suggested, for example, that workers exposed to repetitive practices experience decreasing levels of arousal. The resultant drowsiness may threaten both productivity and safety, and be experienced as aversive. Workers attempt to compensate for these low levels of arousal, and possible feelings of boredom, both cognitively and behaviourally. When feelings drowsiness and boredom are associated with attempts at compensation, this effort appears related to increases in urinary catecholamine excretion (S. Cox et al., 1982), but when such feelings do not elicit attempts at compensation they may be associated with low levels of urinary catecholamine excretion. These endocrine reactions may be involved in the aetiology of cardiovascular disorders in repetitive workers (Samoilova, 1971), along with other factors such as regular drinking and excessive smoking (Laville and Teiger, 1975; Nerell, 1975). Excessive smoking may itself be involved in the compensation for low levels of arousal at work.

There is some general suggestion in the literature that the psychosocial factors related to the control of catecholamine activity may predispose towards coronary heart disease (Carruthers, 1980), while those related to the pituitary-adrenal; cortical system may be involved with disorders of the immune system, and possibly cancers (Cox and Mackay, 1982). However, activation of both the sympathetic-adrenal medullary system and the pituitary-adrenal cortical system may be important in creating the neuroendocrine imbalance which permits both forms of pathology.

There are few studies in existence which are capable of testing out the possible differential effects of these controlling factors. However, a recent study by Grossarth-Maticek et al., (1982) offers some support for the "differential control" hypothesis.

Grossarth-Maticek and his colleagues (1982) have been engaged in a longitudinal study of 1353 inhabitants of a Yugoslav town, and have now published their 10 year follow-up data. In their study they characterized the inhabitants in terms of being active emitters of passive receivers of inter-personel repression. This was done with respect to their family, job, leisure and social/ political groups. The data suggested that being a passive receiver of repression was associated with subsequent incidence of cancer, while being an active emitter of repression was associated with coronary heart disease, although less strongly. This study is a very interesting first step in what should become an important line of research.

Concluding Comments

In the course of this brief commentary it has been suggested, inter alia, that situations which give rise to anxiety may increase sympathetic-adrenal medullary activity, possibly increasing the ratio of secreted adrenaline to noradrenaline, while situations associated with depression or helplessness may increase pituitary-adrenal cortical activity. It has been suggested that anxiety-producing situations may elicit escape behavior, and the depression or helplessness may be elicited by the loss of status, power or control. Somewhat separately, the psychosocial factors associated with increased sympathetic-adrenal medullary activity have been tentatively linked to coronary heart disease, and those associated with increased pituitary-adrenal cortical function more tentatively linked to impaired immune system function, and possibly cancers. The neurophysiological control of the two behavioral and endocrine mechanisms appears to reside in the limbic system and associated structures. The amygdala appears to be important for the control of sympathetic-adrenal medullary activity and associated behaviors, while the septal-hippocampal complex appears to control pituitary-adrenal cortical activity and associated behavior. These two complexes may form part of one overall system, and operate in response to stressful situations and the experience of "stress" in humans.

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COGNITIVE-BEHAVIORAL MODELS OF ANXIETY

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COGNITIVE-BEHAVIORAL MODELS OF ANXIETY

Apart from Freud and his followers, there have been few, if any, serious attempts to encompass phobias and generalized anxiety within an all embracing theory.

Behavioral theorists such as Eysenck and Rachman (1965) have of course attempted to formulate conditioning theories in which phobias are learned by the fortuitous association of phobic stimuli with events evoking fear or pain. However, the most influential conditioning model in such accounts, the two-factor theory of avoidance learning, has come under serious attack from both experimentalists and clinicians.

Problems with Conditioning Theory

The two-factor theory proposes that all learning (and presumably also phobias) involves two types of conditioning. The first of these is the classical conditioning of an emotional reaction to a warning C.S., while the second is the reinforcement of operant avoidance by the reduction of this conditioned emotional reaction. However, avoidance responses can apparently be learned in the absence of identifiable external signals, as when animals avoid regular but unsignalled shock. Furthermore, behavioral avoidance usually continues unabated despite the steady decline of autonomic anxiety, but avoidance can be extinguished behaviorally even when autonomic anxiety remains (Mineka, 1979). If autonomic anxiety and behavioral avoidance can be divorced, then it is difficult to argue that the relief of classically conditioned fear is necessary to reinforce and

maintain behavioral avoidance. Similarly, if an external signal is not essential for avoidance to be learned, it is difficult to see how responding can be reinforced by the reduction of fear evoked by a C.S. Thus, while it is possible to maintain that phobias are examples of two-factor learning, it is not possible to maintain simultaneously that phobias are modelled by avoidance learning in the laboratory.

At the same time, clinical researchers have pointed out a number of other difficulties for conditioning theories. Although there are case histories consistent with a conditioning history, there are many other cases where no direct and aversive contact with the feared situation appears to have occurred. In such cases it seems that indirect or symbolic learning needs to be invoked. Furthermore, it seems that phobias can be acquired very easily to some stimuli, such as snakes, spiders or heights, but with great difficulty to equally dangerous objects, such as electrical appliances or cars. Finally, although some conditioned reactions extinguish more slowly than others, phobic reactions do not appear to extinguish at all.

It may be that simple phobias can be rescued from these difficulties by the notion of biological preparedness. Symbolic representations of phobic stimuli, such as pictures of spiders, can be shown to produce conditioned autonomic reactions which are acquired very readily, but extinguish very slowly, and are relatively uninfluenced by experimental instructions (Ohman et al., 1978). Additionally it may be that traumatic conditioning experiences, followed by long intervals between exposures to the conditioned stimulus, may sometimes be associated with the incubation of fear, rather than its extinction (Eysenck, 1976). That phobic patients cannot always remember such original conditioning experiences, does not of course prove that they did not occur. It is still possible therefore, to construct an updated conditioning theory which might account for some specific phobias.

However we are not primarily concerned here with specific fears, which present less frequently as clinical problems; but rather with the more severe and handicapping forms of anxiety, such as agoraphobia or generalized anxiety. To account for these in conditioning terms, we must assume that agoraphobics (for example) have been exposed to painful or fear inducing unconditioned stimuli while in contact with a wide range of situations, such as crowds, streets, shops, buses etc. This not only seems intuitively very unlikely, but has not been supported by any convincing evidence in surveys where specific enquiries have been made about the events leading up to the onset of agoraphobia. In the study by Buglass et al. (1977), only two of thirty agoraphobics could recall any painful or frightening events which occurred in a situation which subsequently became a phobic stimulus. Hence, one patient recalled a near traffic accident when out with her young son, but most other patients recalled only

that their fear and panic attacks came "out of the blue". However, the same study did find evidence that most patients felt themselves to be under some background stress at the time the phobia developed. Thus many patients described how they had been concerned about some apparently unrelated issue, such as a family problem, around the time they experienced their first panic attack.

Once a panic attack has occurred (possibly in response to such general background stress) a secondary type of conditioning theory is possible. This states that the panic attack itself is such an aversive experience that it acts as a punishing unconditioned stimulus and leads to conditioned fear of a repetition in similar circumstances. Patients' own descriptions strongly support some form of this theory, since avoidance is usually a direct function of the perceived probability of provoking a further panic. Furthermore, few who have listened to an agoraphobic's account of their fears and feelings during a panic attack can doubt that it is an extremely aversive experience. For this reason, the role of conditioning cannot be entirely dismissed, while acknowledging that it seems insufficient to account for the occurrence of panic attacks in the first place.

To account for generalized anxiety seems even more problematic. Initial formulations (for example by Wolpe, 1958) suggested that anxiety may have been conditioned to omnipresent stimuli such as buildings or people, but it is difficult to imagine how such conditioning could occur, and still less why it should fail to extinguish. As with agoraphobia, the evidence suggests instead that life events or stressful circumstances play an important role in triggering the disorder. Finlay-Jones and Brown (1981) show that there is a significant surplus of life events prior to the onset of anxiety disorders, and these authors also make the case that these events can be designated as "dangers", as opposed to "losses" which tend to precipitate depression.

It seems that we must first acknowledge that simple conditioning models of anxiety, while possibly containing some truth, are clearly insufficient to account for the facts of agoraphobia and anxiety neurosis. If other factors, such as specific events or life circumstances which are perceived as posing a threat play a part, it will obviously be necessary to incorporate these factors within any new model. As a starting point, then, we may reasonably ask what factors make individuals particularly vulnerable to panic attacks following the perception of dangers, or more prone to interpret such events as personally threatening.

Influence of Biological Factors

Obviously there are likely to be important biological differences among individuals, and we would be foolish to ignore this

possibility. Just as some relevant personality dimensions are determined in part by genetic factors, so there is good evidence that anxiety neuroses are influenced by inherited differences. Slater and Shields (1969) reported strikingly high agreement in the diagnosis of anxiety neurosis in monozygotic twins (40%) in comparison with dizygotic twins (4%). Although Torgersen (1979) found a less striking difference between MZ and DZ correlations in agoraphobia factor scores on a questionnaire, these were still in the expected direction (.7 for MZ versus .4 for DZ twins). Both agoraphobic and general anxiety patients show high resting levels of autonomic activity, and are slow to habituate to neutral stimuli, again suggesting a tendency for both groups to be similarly overactive. Such observations might indicate a biological basis for vulnerability to panic under certain circumstances. Assuming that some individuals have a general tendency to recover slowly from autonomic reactions, the chances of summation across reactions is increased. In the context of background stress arising from life events that are seen as dangers, such vulnerable individuals will be in a constant state of autonomic arousal. At some point this may reach catastrophic levels; that is, autonomic levels begin to escalate as each reaction fails to dissipate before the next begins (Lader and Mathews, 1968). While such a crisis could happen at any time, it seems more likely to occur under relatively arousing external circumstances, such as in a large crowd of people. If so, then the stage could be set for the development of agoraphobia, particularly if the patient fails to recognize the true origin of their own stress reaction, as Goldstein and Chambless (1978) suggest is characteristic of agoraphobia. Under such circumstances, patients will experience the panic attack as a "bolt from the blue" and may well add the secondary fear that they are ill or even dying.

Thus far, on the basis of admittedly incomplete evidence, it has been suggested that individuals who may be genetically or biologically vulnerable, and who then come under stress, are prone to develop elevated levels of autonomic arousal and subjective anxiety, which may further escalate into an acute attack of panic under appropriate circumstances. Further, it was suggested earlier that the fear of further panic attacks may come to motivate avoidance learning and thus contribute to the development of agoraphobia. The distinction between agoraphobia and anxiety states can thus be seen as a function of differing individual reactions to the experience of chronic anxiety or acute panic, rather than to any more fundamental etiological division. As argued by Hallam (1978), agoraphobics resemble anxiety state patients a great deal more than they do those with specific fears.

Personality Characteristics of Agoraphobics

What then might make the difference between an agoraphobic and a person who experiences severe anxiety but does not begin to avoid

going out? Unfortunately the research necessary to test out difference theories concerning this question has not been carried out. Many authors have argued that agoraphobics are characterized by dependent personalities, and that they have a general tendency to use avoidance as a coping strategy (c.f. Andrews, 1966). This idea is certainly a tempting one, as it would fit in rather neatly with an integrated model in which some individuals (potential agoraphobics) cope with anxiety attacks by avoiding situations in which they occur and turning to others for support. Other individuals, supposedly less avoidant or more dependent, are assumed to use different coping behaviors and thus will be more likely to be diagnosed as anxiety neurotics. This idea may be appealing, but is there any evidence for it?

Even if agoraphobics appear to be avoidant and dependent, obviously there is the problem of which comes first, the behavioral style or the agoraphobic disorder. It may be in the nature of agoraphobia that fear of provoking an inexplicable and terrifying panic will lead to avoidance and dependence on the anxiety-relieving presence of others. To show that a particular behavioral style was instrumental in causing the disorder, we would need to show that it is generalized over different situations or over time (that is, that it occurs in non-phobic situations, or antedates the disorder). Most studies have focused on the latter question and searched for evidence that agoraphobics have always been dependent individuals, perhaps as a result of parental over-protection. Retrospective surveys of this kind are notoriously unreliable, so that no unequivocal conclusion is possible. A majority of studies have found agoraphobics to report more parental over-protection than controls, and one investigation of the mothers of agoraphobics found them to agree with this judgement (Solyom et al., 1976). On the other hand, some studies have reported the opposite finding (Parker, 1979). It is possible only to suggest that parental failure to encourage independent coping behavior may be a relevant factor, but more evidence is necessary before this can be considered to be any more than a hypothesis. Before concluding this section, it is worth mentioning one further speculation, based on the findings of a correlation between the severity of agoraphobic symptoms and locus of control (Emmelkamp and Cohen-Kettenis, 1975). Since the more severe agoraphobics tended to report an external locus of control, it may be that individuals who are more likely to attribute panic to situational rather than personal factors are more at risk to develop agoraphobia. For example, external attribution is likely to reinforce any pre-existing tendency towards avoidant or dependent behavior.

Towards an Integrated Model

We can now try to assemble the various pieces of this etiological jigsaw and construct an integrated model of the causation and

maintenance of agoraphobia. It is assumed that vulnerable individuals who come under situational stress, may be prone to experience chronic anxiety or acute attacks in arousing environmental circumstances. Once having experienced intense anxiety, various outcomes may result form the different ways in which individuals can interpret their own feelings. Attribution to external situations and consequent avoidance may lead to increasing reliance on this method of anxiety control, which then serves to maintain agoraphobic behavior along the lines suggested by the two-factor theory. Attribution to other causes, or a less dependent and avoidant response style, might lead instead to other forms of anxiety neurosis. Even if this theoretical framework could be substantiated by future research, many questions remain unanswered. By what mechanism do threatening life situations lead to anxiety states? Why does agoraphobia often intensify and spread over time, until the individual is virtually housebound? What maintains anxiety neuroses after the impact of the triggering event or situation has dissipated? In the absence of any avoidance, making exposure treatment impossible, how can anxiety neuroses be treated?

Answering all these questions is obviously impossible at this stage, but it is none the less important to put forward tentative answers if research and treatment is to be guided by theory. It will be suggested here that the link between threatening life events and anxiety is mediated by cognitive mechanisms, which lead to the selective processing of information relating to personal danger. This selective processing is supposed to evoke, exacerbate or maintain anxious mood, which in turn serves to prime further danger related cognitions, and thus form a self-maintaining loop. Before returning to this model, we should first examine the evidence linking cognitions of danger and anxiety.

Cognitive Processes and Anxiety

Despite obvious face validity based on our own experience, evidence that cognitions about danger cause anxiety, rather than the other way round, is surprisingly lacking. The ambiguity in causal direction becomes more obvious when we consider anxiety neuroses: does the over-interpretation of events as threatening lead to anxiety disorders, or does the presence of severe anxiety lead to a tendency to dwell on possible dangers? It certainly appears to be true that anxiety neurotics are preoccupied with danger, although not necessarily those that can be directly traced back to life events. Beck et al. (1974) report uncontrolled interview data suggesting that patients with anxiety neuroses are aware of thoughts or images of possible death, disease, rejection or failure at the times they feel most anxious. Despite some minor differences, a surprisingly similar list appears in data obtained from agoraphobics (Burns and Thorpe, 1977). However, quite apart from the lack of comparative data from any non-anxious control groups, there must be doubts about the validity of such data which are both introspective and retrospective.

A less transparent measure of the postulated selective processing of information concerned with danger may be provided by subjective estimation of probability of event outcomes. As demonstrated by Tversky and Kahneman (1974), judgements of event probability are often influenced by heuristics such as availability or representativeness. For example, Lichenstein et al. (1978) reported that estimated probability of different causes of death (for example, from floods or asthma) are over influenced by the ready availability from memory of dramatic or easily imagined examples. Hence most people estimate death from floods as more frequent than those from asthma, although the latter is in fact nine times more likely. Presumably most people have read more newspaper accounts of death by drowning in floods, or can imagine it more easily, whereas asthma is thought of as a common disorder with non-fatal consequences. Similarly, merely asking people to imagine a vividly described hypothetical outcome may be enough to increase perceived probability (Carroll, 1978).

Thus, when estimating personal threat, it is not the objective statistical risk of an event that causes anxiety, but instead an intuitively derived estimate based on heuristics which can be heavily influenced by the salience of the event of by cognitive processes such as mental rehearsal.

Subjective Probability of Danger in Anxiety Neurosis

In recent collaborative research (with Gillian Butler) these ideas were used to test the predicted effects of a preoccupation with personal danger in anxiety neurotics. Patients diagnosed as anxiety neurotics were asked to rate the probability of a number of unrelated future events, some pleasant (for example, winning a lottery) and some unpleasant (for example, being attacked by a burglar). Some questions asked that events be rated as applying to the person completing the questionnaire, while other asked the respondent to rate the risk of the same events for another unidentified person. Comparing anxious patients with normal controls revealed that there were no differences for the pleasant events, but patients rated unpleasant events as significantly more likely than did controls. However, this effect interacted with the subject of the rating, so that only when risks were being rated for oneself was there a clear subjective elevation of subjective risk for the anxiety patients. It would appear then that the patients did not see the world as a universally dangerous place, but rather that they saw themselves as especially vulnerable to danger. Item analysis showed this to apply particularly to risks of disease or social rejection, consistent with the content of preoccupying thoughts reported by anxiety neurotics.

This result may also explain other clinical observations (as reported for example by Beck, 1976) that as phobic patients approach a feared situation, their subjective estimation of danger often rises sharply. Thus a patient fearful of flying constantly increased his

estimated risk of a crash the nearer the time came to boarding the aircraft. Starting at less than one in a thousand when not planning a flight, his subjective risk exceeded 50:50 at take-off. The earlier discussion suggests one explanation for the changes as a possible danger approaches. Cognitive structures involved in appraising personal risk (danger schemata) will be increasingly activated, and risk estimates will rapidly rise, once the patient begins to contemplate the flight and imagine possible disasters. This would follow from use of the availability huerisitic in judging the probability of a crash on the basis of its salience or vividness, with increased anxiety as the final result. The alternative view is that anxiety is the result of autonomic and unconscious processes set in train by events previously associated with threat. In this view, the increases in subjective risk estimates arise as a secondary consequence of the mood state itself and are the result, rather than the cause, of anxiety.

In Bowers (1981) network model of memory, information about emotional states is stored together with events that have been associated with that emotion in the past. Following the experimental induction of mood, Bower has shown that it is easier for subjects to recall information about events that are congruent or compatible with the same mood. Thus it is possible that anxiety is a primary and automatic response to a particular event, and reportable cognitions about vulnerability to other dangers merely the result of mood priming effects. An additional possibility, to be discussed later, is that this process by which anxiety primes danger related cognitions, forms the second link in an emotional/cognitive loop.

Subjective Probability and Examination Anxiety

In a further study (with Janine Braier) we have tested whether examination anxiety in normal students would show effects predicted for this model. Most of us have experienced increasing anxiety as an examination approaches, and are aware of simultaneously becoming increasingly concerned about the possible outcome. If, as we suspect, thoughts about failure become more available as the examination approaches, then so will the subjective probability of a negative outcome for oneself relative to others. If anxious mood has the effect of priming all cognitions related to danger, then the probability of other dangers may also be raised. Accordingly, we asked students who either did or did not have an examination to take in the near future, to estimate the subjectivity probability of good or bad outcomes in the same way as we had with anxiety patients. Some of the items were related to examinations, and others concerned unrelated dangers, such as being attacked or becoming ill. As with the previous study, both negative and positive items were linked either with the respondent, or an unspecified other person.

Reasons were surprisingly clear-cut. Subjects who had no examinations in the immediate future rated the likelihood of a successful outcome higher than for a negative outcome, irrespective of reference to themselves or others. Subjects having an examination one month later, showed a bias towards a less favorable outcome of the examination, but only for themselves as opposed to others. The same subjects re-tested immediately before the examination showed an even more pronounced difference. The subjective probability of a negative outcome in examination candidates had become far greater for themselves than for others. As would be expected, the reverse held true for the estimated probability of a successful outcome, with others being accorded a far better chance than the respondent. Strikingly, there were no equivalent differences or changes with non-examination related risks, indicating a relatively specific effect.

Retrospective ratings confirmed that, as predicted, subjects were thinking more about the examination as the time approached for them to take it. Subjective risk of a negative outcome rose at the same time, as it does with phobic patients approaching a feared situation. Consistent with the hypothesis that increased subjective risk leads to anxiety we found significant correlations between subjective estimates of failure risk and state anxiety, particularly anxiety just before the examination. Since subjective risk on the first occasion predicted state anxiety immediately before the examination, but initial level of anxiety was less predictive of final subjective risk, it would appear that in normals, perceived danger leads to anxiety rather than the other way round. As expected, the rise of subjective risk was most noticable with subjects with high trait anxiety scores.

Is There A Cognition-Anxiety Loop?

Although this last study did not involve patients, it makes the link between subjective appraisal of danger and anxiety states increasingly plausible. It also provides evidence that increasing preoccupation with a possible danger is associated with a correlated increase in subjective risk and anxiety, despite the lack of any new objective information about that danger. At the risk of being excessively speculative, it is not difficult to generate implications from these findings for the etiology and treatment of anxiety states. Although we found no evidence in the study of examination anxiety to support the complementary hypothesis that anxious mood in turn elevates the perceived risk of all types of danger, it will be argued here that this may indeed occur in anxiety states. First, a recent study by Laird et al. (1982) showed that subjects who reported an emotional state consistent with the manipulated facial expression of fear, were also better able to recall sentences descriptive of danger. Second, results from the experiments cited earlier by Bower (1981) are similarly consistent with the idea that recall of fearful

material will be generally facilitated by anxious or fearful mood at the time of recall. Thus, to the extent that danger - relevant information is already available in memory, the presence of anxiety will increase the chances of its being accessed. In the case of anxious patients, it is assumed that well developed cognitive structures relevant to danger (danger schemata) are already in existence, and that they will be accessed when the patient is anxious. Normal students, on the other hand, are assumed to have less elaborate danger schemata, so that the anxiety evoked by the subjective risk of examination failure does not lead on to other imagined dangers. In short, it is proposed that there is a one-way path between perceived danger and anxiety in normals, but a two-way path in anxious patients: a cognition-anxiety loop (see Figure 1).

A possible two-way interaction between selective recall and emotional state could help to explain how agoraphobia or anxiety states may sometimes intensify and spread. If selective rehearsal of possible dangers leads to increased subjective risk and thus anxiety, while anxious mood in turn serves to prime recall of previously experienced or imagined dangers, then fear may escalate out of control. In the case of agoraphobia, such a dynamic could be responsible for the increasing ease with which particular places evoke panic; in anxiety states a similar cueing function could be performed by thoughts or somatic sensations. If any stimulus, internal or external, elicits both fear and the recall of previous situations in which fear has been experienced, then that stimulus will come to seem even more fearful.

Such a cognitive analysis, coupled with the behavioral model described earlier, leads to a number of recommendations for treatment, only a few of which can be touched on here. It suggests that the patients own reaction to panic may be a crucial feature determining outcome, and thus emphasis the importance of panic management as

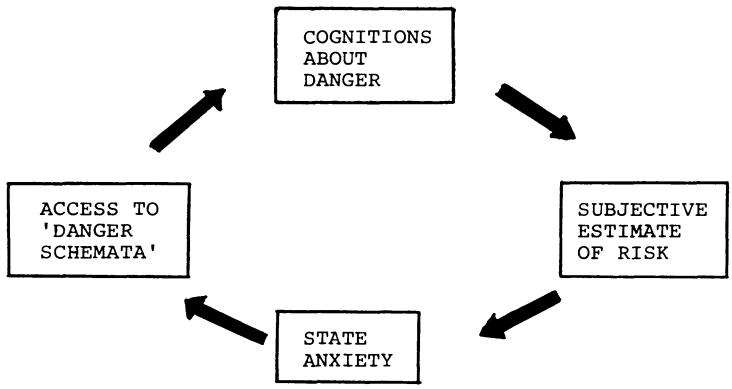

Fig. 1

a part of exposure treatment in agoraphobia. Similarly, manoeuvres to reduce subjective risk, for example by providing alternative and more reassuring explanations of anxiety may be crucial.

If there appears to be nothing new in these observations, the implications for the cognitive treatment of generalized anxiety may possibly be less obvious. Since the postulated danger schemata will differ somewhat between individuals, despite common themes, the method of cognitive therapy described by Beck and Emery (1979) seems likely to be the best starting point, on the grounds that it is more flexible than other methods of anxiety management (e.g. Suinn and Richards, 1971). A major difficulty is likely to arise however, due to the varying accessibility of cognitions relating to danger, and the countering cognitions developed during therapy. The latter are likely to be easily accessed during therapy when the patient is calm, but less easily so outside when the patient is feeling anxious, while the reverse may be true for cognitions relating to danger. For example, a hypochondriacal patient receiving cognitive therapy was readily able to generate convincing reasons why her throat symptoms were probably the result of tension during therapy, but when feeling anxious on waking in the middle of the night could think only that she was dying of throat cancer. Presumably, the alternative viewpoint learned in therapy was difficult to access when feeling anxious, while the imagery of herself with cancer was so vivid as to be totally convincing. One obvious possibility would be to induce anxiety during therapy and to teach cognitive coping methods under these conditions. Alternatively, other methods of increasing accessibility could be explored by using strategies such as rehearsal or imagery to link anxiety with countering information.

In the past, behavioral treatments for phobic anxiety have benefited greatly by the infusion of ideas from learning theory. If we are to extend our therapeutic range and effectiveness with anxiety disorders, we should now be looking to experimental cognitive psychology for a similar interchange. I feel sure that both clinical and experimental psychology stand to gain as a result.

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COGNITIVE INVALIDATION AND THE ENIGMA OF EXPOSURE

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EXPOSURE - A HOT POTATO

The story is told of a renowned behavioral scientist who was running a laboratory containing a number of rats in Skinner boxes. He was obtaining gratifyingly predictable cumulative records of rat behavior - that is, except in the case of one rat. This dissident rat seemed to have no respect for operant conditioning and refused to perform according to theory. After many weeks of work with this rat, students in the laboratory arrived one day to find it missing from his cage. It was never found. No one ever discovered what had happened, although there was a strong suspicion that the behavioral scientist had found the ultimate answer to this discrepant datum. This story is a parable of how scientists can deal with information which is contradictory to their theory. They may ignore, bury or disregard it as unimportant. Within the field of behavior therapy, approaches to anxiety, there is one such nagging discrepancy on which we would like to focus some attention in this paper, in the belief that the discrepancy itself carries the possibility of an advance in our scientific understanding about anxiety. This is the finding that in vivo exposure - that is, making the patient stay in the feared situation - is successful in reducing phobic anxiety.

Wolpe's book "Psychotherapy by Reciprocal Inhibition" (1958) was the birth of behavior therapy as a new discipline, with conditioning theory as its fundamental premise. The conditioning technique of systematic desensitization proposed by Wolpe soon became a standard clinical technique for phobic conditions, and a vast amount of research followed. Through various experiments, systematic desensitization was dismantled bit by bit. It was found that it worked as well with or without a hierarchy (Krapfl and Nawas, 1970)

and later, that relaxation was redundant (Gillan and Rachman, 1974). In summarizing the research literature, Marks (1978a; 1978b) concluded that exposure in vivo was the most effective element in successful treatment and was, indeed the basic mechanism operating in all successful therapies for phobic anxiety.

This finding was precisely the opposite to that predicted by Wolpe's conditioning theory. In systematic desensitization the association of relaxation with the feared stimulus was supposed to contain the key to neutralizing the phobia - yet here, in exposure, we often associate high degrees of anxiety with the phobic stimulus and get improvement.

How do we deal with such a discrepancy? One way, of course, is to change the original explanation in such a way as to incorporate the discrepancy, as Marks (1973) and Eysenck (1979) respectively have done in their concepts of "habituation" and "incubation". Another way is to add on elements from another approach or theory such as Meichenbaum (1977) or Mathews et al. (1981) have done in combining a conditioning and cognitive viewpoint. The scientific philosopher, Imre Lakatos (1978), had this to say: "a research program is said to be PROGRESSING as long as its theoretical growth anticipates its empirical growth, that is, as long as it keeps predicting novel facts with some success; it is STAGNATING if its theoretical growth lags behind its empirical growth, that is, as long as it gives only post hoc explanations." We would suggest that the (classical) conditioning model has reached the "stagnation" stage and should be completely jettisoned, rather than retained in a modified form. The adherence of behavior therapists to conditioning theory has fostered a narrow and over-simplified view of the nature of anxiety, and has relegated cognitive aspects to a minor, non-causal role. Also, these conditioning "blinkers" have caused us to ignore certain critical features in the phenomenology of agoraphobia which, we would suggest, hold the key to the understanding and improvement of exposure therapy.

COGNITIVE APPRAISAL AND AGORAPHOBIA

Epstein (1972) points out that the conditioning view of anxiety, as simply an aversive state analogous to pain, is a minority view amongst theorists on anxiety. Writers such as Spielberger, Lazarus, Liddel, Goldstein, McReynolds, Rogers, Mandler and Kelly emphasize the CAUSAL role of cognition in generating anxiety. Elsewhere (McFadyen and Baker, 1981) we have presented a model of anxiety, deprived from the theoretical work of Spielberger (1966; 1972); Lazarus (1972; 1978) and Kelly (1955; 1963), which offers an alternative explanation for the processes involved in different behavior treatments for phobias. The main points of the model will be sketched in briefly, as follows: the theoretical position of both Spielberger

and Lazarus is similar, the central postulate of both being that anxiety is generated and maintained by a person's appraisal of threat. It is not whether a situation is objectively dangerous that determines anxiety, but whether the person appraises it as dangerous. The intensity of any anxiety state (Spielberger's terminology) is regarded as proportional to the degree of threat perceived by an individual and will continue as long as the person appraises the situation as threatening. "Threatening" for both writers refers to psychological as well as physical threat. Lazarus distinguishes two sorts of appraisal; "primary appraisal" refers to a person's judgement about how potentially harmful a situation or event is, "secondary appraisal" refers to a person's judgement about their capacity to cope with the perceived threat. Lazarus also notes the possibility of "reappraisal", that is, a changed evaluation based on feedback. Both writers recognize the role of "trait anxiety" (Spielberger's terminology), that is, relatively stable individual differences in anxiety proneness. Persons high in trait anxiety tend to perceive a larger number of situations as dangerous or threatening than persons low in trait anxiety, and will respond to such situations with more intense anxiety. Also, both writers affirm that cognitive and behavioral manoeuvres will be adopted by the individual if they lead to a reduction in subjective anxiety, but that such manoeuvres should be conceptually distinguished from the anxiety state itself. Within the basic ideas of Spielberger and Lazarus, we have incorporated Kelly's concept of "validation/invalidation" as the process whereby appraisal is continuously modified by experience. "Validation represents the compatibility (subjectively construed) between one's prediction and the outcome he observes. Invalidation represents incompatibility (subjectively construed) between one's predictions and the outcome he observes." (Kelly, 1963, p.158).

Neither Spielberger nor Lazarus have developed the clinical implications of the theoretical framework very far, and neither has applied it to agoraphobia. We would like therefore, in this paper, to consider how the exposure treatment of agoraphobia can be understood and refined within this framework. We primarily focus upon agoraphobia, as opposed to other phobias, for several reasons. A strong argument can be made for distinguishing between agoraphobia and other phobias. This is based on consideration of clinical features (Klein et al., 1978; Snaith, 1968), research data (Hallam, 1978), epidemiological studies (Agras et al., 1969; Agras et al., 1972) and factor analytic studies (Hallam and Hafner, 1978). There is some controversy as to whether agoraphobia should be seen as a separate syndrome (Marks, 1981a; Mathews et al., 1981) or as a variant of an acute anxiety state (Hallam, 1978; Klein et al., 1978; Snaith, 1968). While we favor the latter position, it is sufficient for our purposes here to note the distinction between agoraphobia and other phobias.

ROLE OF PANIC ATTACKS

In attempting to understand the exposure treatment of agoraphobia within a cognitive framework, there is one clinical phenomenon which is fundamental to agoraphobia and which, we believe, must receive special consideration. This is the phenomenon of the "panic attack". The term panic attack refers to a spontaneous, sudden and extreme arousal of the autonomic nervous system (klein et al., 1978), experienced as varying combinations of palpitations, tachycardia, shortness of breath, dizziness, nausea, tremulousness or weakness of limbs, and sweating. The body seems to react as if one has had a sudden severe fright, but in the absence of any obvious external precipitant. Not surprisingly, it usually engenders feelings of extreme apprehension. As well as occurring in agoraphobia, it is a common feature of general anxiety states and depression (Stampler, 1982).

Panic attacks occur, for the majority of sufferers, some time after a precipitating event or during a general period of stress (Buglass et al., 1977; Burns, 1980; Roth, 1959; Shafar, 1976), although for a small number of sufferers there is no apparent precipitant (Burns, 1980; Roth, 1959). Different authors emphasize the importance of particular precipitants, although research evidence is lacking for any one precipitant. Clinical experience would suggest that it is a general stress response not specific to one type of life event or conflict but varying from individual to individual. The question as to why one person should react to a stressful event with a panic attack, and another person should not, cannot as yet be answered.

Although panic attacks are not specific to agoraphobia, nearly all agoraphobic patients report that one or more such attacks occurred prior to the development of situational anxiety (Klein, 1964; Klein et al., 1978; Weekes, 1976). Although there may be a period of stress in the lift of the sufferer at the general time in which a panic attack occurs, the attack does not immediately follow the event but appears suddenly "out of the blue" (Klein and Fink, 1962). We feel it is important to distinguish the first few spontaneous panic attacks from subsequent ones which can be set off through fear of having a panic attack. Perhaps we should restrict the term "panic attack" to the sudden, unexpected, largely physiological sensations, with a term such as "panic reaction" to describe the later, self-generated responses.

DEVELOPMENT OF AGORAPHOBIA

Briefly, our model for the development of agoraphobia is as follows. A precipitating stressor or stressors, which vary in nature from individual to individual, occur in a person's life. That person

may or may not be anxiety prone, and may have personal characteristics which render them unable to resolve the stress. The interaction of the stressor and these personal vulnerabilities results in panic attacks, A panic attack is so frightening and perplexing, in its own right, that the person often misinterprets or misappraises its true nature (i.e. what caused it, what it is, and what will happen). This mistaken appraisal leads to the development of various reactions depending on the nature of the appraisal. Some people develop agoraphobic reactions; others,who might be described under the heading "anxiety state," develop other reactions. Generally, we would not expect agoraphobia or general "anxiety state" to develop unless there is such a misappraisal, although we should add that a panic attack is such an inexplicable and traumatic experience the misappraisals seem to be the norm rather than the exception.

In order illustrate this in more detail, let us view things through the eyes of an individual patient. Let us imagine that we personally have been through a period of particular difficulty at work or in our marriage or family. Let us imagine that one day we experience very severe and sudden discomfort without there being an obvious cause. We break into a sweat, become hot and then cold, our heart races and beats irregularly, our breathing becomes shallow, we experience choking sensations, and we feel faint and tremulous. During this time we may feel far away from ourselves, as if hearing our voice from a distance, and our thinking is dulled "like cotton wool."

These sudden severe sensations amount to a very frightening, even terrifying, experience. What would we do? We would, naturally, try to understand what is happening to us. We would try to interpret, or appraise, our discomfort. We may appraise the cause, the nature of what we are suffering, but particularly, as our discomfort mounts rapidly, we fearfully appraise the consequence - "What will happen next?" We may believe that our feelings will continue to build up to such proportions that a "breaking point" will be reached where we will utterly lose control. We may anticipate, particularly as we experience dizzy sensations, that we are going to pass out, fall down or faint. We may truly believe that we are dying; alternatively our fear may be in terms of running berserk or making a fool of ourselves. Some people believe this experience to be a heart attack, others a brain tumor and others, that they are losing control of their senses and memory. A panic attack really feels as catastrophic as this and people really believe a personal disaster is occurring. In this paper we use the expression "loss of control" as a general term covering these appraisals. It is term often used by patients themselves to refer to what they fear during panic. We would suggest that such construing is not irrational, but is perfectly reasonable given the intensity and form of the panic attack. Indeed, since the person's autonomic sensations do seem out of control, the appraisal of loss on control is understandable.

We may not, of course, mistakenly appraise a panic in such a catastrophic way. In this case we would not expect phobic reactions to develop. However, if we really did believe we were losing control we would obviously start reacting in various ways in accordance with that belief. Initially, after trying to regain control or lessen the symptoms of a panic attack, we might try to reach a place of safety. We might, particularly if we thought this to be a physical illness, call in the G.P. We may subsequently start to avoid situations places or sensations in which we found panics to occur most frequently or where we feared they might occur. Also, we may find ways to avert or minimize a panic, such as only going into feared situations with a friend, carrying a stick to steady ourself, or taking Valium or alcohol prior to any trips. We may also become extremely sensitive to any sensations which we think herald a panic and consequently start to avoid situations at an early stage. We may become so vigilant of our physiological sensations as to mistake, for instance, feelings due to heat in a shop, indigestion, or symptoms of 'flu, as an impending panic attack. Naturally, the more anxious we become about physiological sensations, the more sensations we produce, which makes us more anxious, and so on, until we can actually create the very panics we fear.

Lastly, peripheral aspects of our appraisal of loss of control can change as we reappraise situations and sensations as dangerous or safe. This could lead, in some cases, to a widening of the number of triggers that can set odd a panic and, in some cases a narrowing to only certain specific triggers. In short, these reactions amount to agoraphobia. There are, of course, an infinite number of different ways of construing panic attacks and a variety of consequent reactions. Beck and Rush (1975), in comparing phobic patients and those with "anxiety neurosis," found that the way in which both groups appraised catastrophe was similar except the appraisals of the phobic were more specific, more external and more avoidable. We regard it as quite feasible that from the same events - panic attacks - one person could develop a reaction which we might describe as "general state" and another develop an agoraphobic reaction. If a person construed panics in more pervasive and less situational terms, such as "I could have a mental breakdown at any time," one would expect them to react with a state of continuing fearful expectation more characteristic of general anxiety.

In summary, we are saying that panic attacks generate certain beliefs or appraisals and if these beliefs are understood by the therapist, the various types of behavior problems that follow make good sense. From a theoretical point of view, once cognitive appraisal is ascribed a causal role, it follows that correcting the appraisal will lead to changes in the person's behavior and experience of anxiety.

COGNITIVE INVALIDATION

Having considered how agoraphobic symptoms might develop from a cognitive viewpoint, we now turn to how exposure might operate to reduce phobic anxiety. We suggest that it operates, mainly, not by extinction or habituation but by invalidating the various mistaken appraisals which underlie the anxiety. Clinical and experimental use of exposure various on a number of parameters. While there is evidence for the superiority of in vivo exposure over imaginal exposure (e.g. Stern and Marks, 1973; Emmelkamp and Wessels, 1955), evidence on most other parameters is insufficient, equivocal, or lacking (Marks, 1978, a and b; Brehony and Geller, 1981). Typically, most exposure programs are gradually graded, i.e. the client is initially introduced to situations of relatively low threat and progresses to situations of relatively high threat. Some workers try to keep experienced anxiety low, possibly using anxiolytic drugs (Friedman, 1966); some emphasize anxiety management (Suinn and Richarson, 1971) which might be by relaxation or "rational restructuring" (Goldfried, 1979). Some see the level of anxiety as irrelevant, but regard lower levels as possibly facilitating exposure to situation which might otherwise be avoided (Marks, 1981a; Mathews et al., 1981).

There are a number of ways in which such programs could invalidate aspects of the person's appraisal and so lead to improvement. For example, if panic does not occur, the person may construe that whatever was wrong with them which caused them to panic is no longer wrong. They may, if anxiety management is stressed, come to believe that they have learned how to keep their anxiety from reaching panic. More commonly, we believe, they simply appraise threat of panic attacks in fewer situations than previously - retaining their "phobia" but at a much less restrictive level. In each of these situations the person has reconstrued the likelihood of panic occurring but may still believe that, SHOULD a panic attack occur, they would lose control. Thus, if a further unexpected panic occurs, and our experience suggests it often does, the person is liable to relapse.

We believe that it is much more logical to invalidate the primary, central mistaken appraisal that panic will lead to loss of control - however this is construed - dying, heart attack, collapse, or mental breakdown. To do this it is necessary to plan exposure to maximize the perceived likelihood of panic. How is this achieved within the framework of the Invalidation Model?

We see the exposure session as an experiment in which the person can test out their hypothesis that they will be overwhelmed and lose control. As with any other experiment, the experimenter has to have an understandable rationale for undertaking the experiment - more so here, where there is more than reputation at stake. We therefore

spend some time prior to exposure telling the person about anxiety and panic. We describe what happens physiologically, in particular, concentrating on those physical sensations of which the person is most frightened. We explain that panic does not lead to loss of control, in whatever way the person construes this, that it is time limited and doesn't need to be coped with, and had no serious adverse after effects. (We have found that many psychologists seem to concur with the patient's view, that a panic is dangerous, and are not confident enough to allow a patient to go through a panic reaction.) Having explained this, we find we rarely have to suggest exposure. Simply asking what the person needs to do to be convinced that they will not lose control usually leads them to suggest exposure. Further discussion sharpens up the experimental design to ensure that the exposure session is an adequate test of the person's prediction. This leads to exposure under conditions which maximize risk of panic.

This description of a therapy session will be recognizable to those of us familiar with the writing of George Kelly (1955; 1963). However, in one sense this is different to most research student-research supervisor guidance sessions: the research supervisor is rarely in the situation of asking his student to carry our a dangerous experiment on himself. The design will, almost certainly, be less than perfect - it will be limited by the degree of risk the person is prepared to take. This usually results in at starting point for exposure, which is not the worst situation the person fears, but is one which makes panic highly likely - in effect, a steeply graded exposure program. At this stage we cannot plan the whole program - like any other research program, later experiments in the program will best be planned on the results of the earlier experiments.

So the person goes off and carries out his experiment, and sure enough, they don't lose control. What do they make of this? As we might expect, clients are usually sceptical about early negative results and question either the design, the replicability of results, or whether the results are generalizable. Some modify their theory between sessions to explain away the negative results. Thus, the client who is accompanied at first, may hypothesize that this design was inadequate to test whether they lose control when on their own. Some may, perhaps very reasonably in the light of past experience, consider that the results were just chance. Some may accept the results in the experimental situation, but still be uncertain whether the same result will be obtained in other situations. Some will change the hypothesis such that perhaps they don't lose control" on good days - only bad days, when they are feeling worse." These reappraisals can be put to the test in further exposure sessions until the person realizes that they do not "lose control" under any circumstances. We must not carry the analogy with a research program too far, however. These are private experiments evaluating experiential evidence - and the conclusions that are drawn may be highly idiosyncratic.

Invalidation of a person's appraisal of loss of control will improve their agoraphobic behavior. This is often sufficient treatment in itself. However, we did mention earlier that there is usually a reason why a person has panic attacks in the first place, hypothesizing that they are a combined effect of stressful events and particular personal vulnerabilities. It may be appropriate to combine invalidation exposure with counselling if, at the time of treatment, the person has not resolved the stress.

APPLICATION OF INVALIDATION MODEL TO OTHER PHOBIAS

While we have focused on agoraphobia, for the reasons given earlier, we believe the Invalidation Model of exposure therapy can be appropriately applied to many more specific clinical and non-clinical phobias. These differ from agoraphobia in that there is no evidence that spontaneous panic attacks are involved in their development, they typically have a different course and there is an earlier age of onset (Marks, 1969). However, we would suggest many of these other phobias are also mediated by predictions of loss of control in the face of a panic reaction (note the distinction made earlier between "panic reaction" and "panic attack"). For example, a person who is phobic of spiders does not fear being harmed by the spider itself, but fears being overwhelmed by the panic reaction. ("Loss of control" here is usually construed as fainting or making a food of one self). We would suggest that such phobias are also most effectively treated by exposure designed go invalidate the loss of control predictions i.e. conditions which maximize the likelihood of a panic reaction occurring.

COMPARISON WITH OTHER THEORISTS ON ROLE OF COGNITION

Many of these ideas are not new, although we hope we are making a new use of them. Not surprisingly, others are also trying to reach a better understanding of the role of cognition in anxiety and its treatment. How do our ideas differ from those of Bandura, Beck, Chambless and Goldstein, Coleman, Ellis, Mathews, and Weekes?

Firstly, we would stress the need to recognize the qualitative phenomenological differences between lower levels of anxiety and panic. We also stress the particular role of spontaneous panic attacks in the development of agoraphobia. A similar emphasis is made be Weekes (1977), Goldstein and Chambless (1978) and Coleman (1981), but these points are not stressed by the other main theorists. In practice, our use of exposure is most similar to Chambless and Goldstein (1980), in that we attempt to ensure that the client experiences panic. However, we believe that the Invalidation Model has implications for much more precise planning of exposure sessions than their notion of extinction of interoceptive conditioning. We

have emphasized the need to take account of the person's appraisals in planning the initial exposure session and their reappraisals in planning subsequent sessions. Depending on how the person reconstrues after an invalidating exposure session, the conditions of exposure might vary very considerably from one to the next. We are unable to see how the concept of "interoceptive conditioning" is used to plan the content of exposure sessions.

Mathews, Gelder, and Johnston (1981), allot a secondary, peripheral role to cognition: "we suggest that cognitive change is secondary to self observation of changes in behavior, but that subsequently the altered expectations act so as to facilitate further self exposure practice" (p.153). Although they thus favor the position of Borkovec (1978), that cognitive change is more explicable as a consequence of, rather than a cause of, behavior change, they do acknowledge the possibility "that a two-way interaction may come to exist between expectation and self exposure practice." They see the main process at work as one of extinction or habituation (pp. 149-150). In practice, their use of exposure is very similar to that of Marks (1981a), i.e. graduated in vivo exposure, in the belief that the main therapeutic factor is contact with the feared situation. Bandura (1977) ascribes a more central role to cognition in suggesting that exposure (and other) techniques are effective through their influence on "perceived self efficacy." He suggests that exposure programs operate by allowing the person to develop a sense of mastery over the situation. While the terms are perhaps cognitive, the concepts are those of traditional operant conditioning. Perceived self efficacy is seen as having a stimulus control function in initiating behavior (the agoraphobic sufferer avoids situations in which they expect not to cope), and as providing a reinforcement effect on successful completion of a behavior (e.g. when an agoraphobic sufferer returns unharmed from an exposure session). In the practice of exposure therapy, bandura and his colleagues (Bandura, Jeffrey and Wright, 1974) emphasize methods similar to the traditional behavior modification techniques of shaping and fading. Thus, with a snake phobic person they might use gradual exposure and "response induction aids" (e.g. large padded gloves) to encourage the person to be able to hold a snake. Once this response is established, the response induction aids are gradually withdrawn (e.g. smaller, thinner gloves) until the person can hold the snake without such aids.

Rather than attempt to reinforce "coping" (real or imagined), we would see the more effective use of exposure to be in the opportunity it provides to invalidate the person's appraisal of the feared situation as threatening - and therefore not requiring any "coping" responses. This distinction is of particular significance, more for clinically presenting phobic anxiety, notably agoraphobia, where we suggest that the central fear is of "losing control" in some way during a panic attack. If the person is panicking BECAUSE they fear they will drop dead, we suggest it makes more sense to show them that

they do not, rather than attempt to reinforce the (erroneous) belief that they are preventing themselves from dropping dead. As well as making more sense, we also suggest that the kind of exposure programs we have described will be more effective in practice. The power of available anxiety management techniques to effectively inhibit the physiological responses experienced during panic attacks is not impressive.

While Beck and his colleagues (1974; 1979) and Ellis (1970; 1979) maintain a similar position to ourselves in the central causal role of cognition, neither seems to have extended their position to understanding and improving exposure treatment of phobic anxiety states. Both use a primarily office-based procedure aimed at restructuring the patient's irrational ways of thinking (e.g. "I MUST not experience ANY discomfort"). Exposure-type homework assignments are used as adjunct to their basic therapies. We would argue that their failure to distinguish between panic attacks and lower levels of anxiety leads both authors to incorrectly focus on the irrationality of patients' cognitions. We are not, however, proposing cognitive therapy, but a "cognitive" model of exposure. We would expect our use of exposure to be more effective than their cognitive therapy techniques it provides direct invalidation of the person's mistaken appraisal, rather than attempting to persuade them of its irrationality. We would not stress the "irrationality" of the cognitions of those persons with phobic anxiety states. We do not believe it is irrational to fear loss of control following a panic attack - it is clearly a most frightening experience.

Coleman (1981) has also presented an account which is, in many respects, similar to ours. He notes the role of spontaneous panic attacks in the development of agoraphobia and sees the subsequent fear as a fear of being overwhelmed by panic. He also sees exposure as most effective when designed to allow the person to examine the validity of catastrophic cognitions. As with Beck and Ellis, we would take issue with this emphasis on the inherent irrationality of patients' fear of loss of control, and with his emphasis on the use of cognitive therapy. We are somewhat surprised at his report of the need for therapy to extend over one to two years, since our own experience is closer to Marks's report of around 8 sessions being sufficient, even for "seriously incapacitated agoraphobics". Unfortunately, Coleman describes his use of cognitive therapy in more detail than his use of exposure and it is difficult to assess how his use of exposure differs from ours. We would certainly not instruct clients "to relax as best as they are able", since we want them to experience panic, not prevent it.

It is interesting that Coleman is one of the few psychologists to cite Weekes (1977), who has for some time espoused a similar view to his, and ours, but has largely been ignored by behavior therapists. Weekes emphasises the importance of patients exposing them-

selves to panic so that they learn that what they fear does not happen. However, she also seems to see this as learning anxiety management. Patients are considered to learn that if they can tolerate "first fear" (the initial physiological symptoms of a panic attack), without adding "second fear" (the fear of being overwhelmed by panic), then the panic does not fully develop, and their over-responsive ("sensitized") autonomic nervous system gradually returns to normal. We would see this as the wrong way round. When the person learns that they do not lose control, they stop having "second fear" i.e. fear of loss of control.

ADVANTAGES OF THE COGNITIVE INVALIDATION MODEL

We began this chapter by suggesting that the model of behavior therapy for phobias, based on traditional conditioning theory, has outlived its usefulness. We suggest that it obscures, rather clarifies, our understanding of the phenomenology of phobic disorders, and is no longer of value in directing research towards improving behavioral exposure. We believe that the Invalidation Model has the potential to resolve a number of key issues in exposure therapy. Marks (1981a; 1981b) sees the central issue as identifying the conditions which determine whether exposure will increase of decrease phobic symptoms. The Invalidation Model states that any experience which is contrary to the patient's predictions of panic and loss of control will reduce phobic symptoms and any experience which confirms the patient's predictions will increase phobic symptoms. The model implies that we cannot determine the necessary conditions of exposure for reducing phobic symptoms without a prior assessment of the person's predictions. However, since panic attacks do not lead to the predicted loss of control, almost any exposure of reasonable duration MAY produce the conditions required to reduce phobic symptoms, in that either the predicted panic reaction does not occur or, if a panic reaction does occur, the predicted loss of control does not. Therefore, we would see the key issue as which conditions produce the greatest and most enduring reduction in phobic symptoms. The model is quite explicit here in that it states that this will occur following exposure to conditions in which the person predict loss of control. Exposure to conditions in which loss of control is not predicted would be expected to have little effect.

At a practical level, the model has implications for much more precise use of exposure. Patients need only expose themselves to situations in which they anticipate a high risk of panic and loss of control. Exposure sessions need only continue until the person's appraisal of the likelihood of loss of control changes. Each session can be very specifically guided by the person's appraisals and re-appraisals about likelihood of panic and risk of loss of control. Exposure therapy can, therefore, be much less of a trial and error procedure than at present.

To conclude, the purpose of any model is not to explain what is already known, but to suggest where, and how, we might look next in our efforts to increase our understanding of events. We would hope that our approach meets the requirements of scientific respectability in that it predicts what is necessary in exposure practice and what is redundant. Both the theoretical and practical implications are explicit and readily open to empirical testing, thus making it amenable to that most basic scientific principle, namely, invalidation.

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A PSYCHO-DYNAMIC PERSPECTIVE ON ANXIETY

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There is one central concept to the arguments presented in this paper and it is this: that anxiety is experienced when a person feels himself in impending danger. This is a viewpoint shared by most theoretical persuasions but there is a particular vantage point which owes most to the psycho-analytical tradition established by Freud. This places emphasis on the danger that stems from an awareness of aspects of one's self, that one does not have the capacity to give thought to, or to reflect upon, or to experience. This is radically different orientation to the one presented by behavioral and behavioral-cognitive theories. I understand them to be implying that the danger that anxiety signals is primarily an external one, e.g. of dogs, and/or that it stems from the patients appraisal of an external stimulus. Such a theoretical model naturally leads to interventions such as desensitization and training the patient to take a realistic estimate of the risk that they are at. Within these frameworks, there is also an awareness that patients come to fear anxiety itself and this has led to various forms of management. However, little stress is laid on attempting to understand what a particular external stimulus may symbolize to the patient and particularly what state of mind it is that is feared by the patient. A psycho-dynamic approach is much more concerned with trying to understand what a patient might feel if his emotional awareness were not "short-circuited" by anxiety.

I do not propose to limit the scope of this paper to anxiety as it occurs in patients who present with symptoms. There are parallel problems that workers in the healing professions have to face, whether they be general practitioners, psychiatrists, clinical psychologists or administrators. I am going to use various clinical

settings and vignettes as vehicles within which I can communicate my ideas. Here are three reasonably well known situations:

i) The scene is a general practitioners consulting room in North London. A woman patient, well known to the doctor and her colleagues in the practice is presenting with symptoms of lower back pain. Looking at her notes, the doctors sees that the patient has consulted her several times in the past two years for different physical complaints which the doctor has rarely been able to diagnose or treat effectively. It is again difficult to diagnose the problem and the patient is asking to see a specialist. The doctor feels a growing sense of irritation since she is aware that previous visits to specialists have not been fruitful. Reluctantly she agrees to refer her.

ii) A young clinical psychologist is asked to see a patient by a consultant psychiatrist. The patient's history is an overwhelming one. Six previous admissions to psychiatric hospitals, diagnoses of schizophrenia and personality disorder, and trials on most of the major tranquillizers. Brought up by a schizophrenic mother, his childhood was chaotic, with many fostering experiences. In the interview, the psychologist notices how difficult it is for the patient to interact with her. She makes a formulation in terms of the patient's difficulties in social situations and she invites the patient to join an already existing skills group.

iii) A hospital management team are meeting and on their agenda is an item about threatening behavior by patients towards the receptionists in the casualty department. After some discussion it is decided to build a shatter proof glass partition between the receptionist and the waiting area.

I want to argue that in each of these cases that professionals have "acted out." The external situation has had the potential to stir up in them emotions which they cannot allow themselves to acknowledge fully or to reflect upon. The professionals, like a phobic patient confronted by a dog, cannot face what is evoked in them and they avoid it by taking action.

Before attempting to understand the situations I have described, I want to present a clinical vignette which illustrates how psychoanalytical psychotherapy can help a patient. I can take it from a recent session with a female patient whose main presenting problems were an inability to form relationships and consequent depressive episodes and social anxiety. In the middle of the session, she told me that she had recently been talking to a friend and had told her that she come for psychotherapy and she went on to describe to the friend some of the issues that had come up in her treatment. She told me that she had communicated to her friend that she felt the treatment was important to her. This woman had never previously talked to anyone about coming for therapy and she had been an

irregular attender with whom it was hard to make emotional contact. Soon after telling me about her conversation she became very panicky and said that it was nearly time to stop, she had another friend coming to her flat for a meal, could we finish the session early? In fact, there were thirty minutes of the session remaining and I was able to interpret to her that she had told me that I and her therapy had become important to her and I thought that this and its acknowledgement made her very frightened and made her want to leave the situation. She responded to this by remembering that she had recently been watching a news program on television and had become very distressed upon seeing pictures of victims of a famine. She had switched the television off but said she had continued to be "haunted" by pictures of starving children which she tried to blot out of her mind. I was then able to interpret to her how I had just shown her a picture of her own hunger for emotional help and her difficulty at looking at it, and that she was now telling me that she wanted to blot that out of her mind too.

One of the reasons that the above vignette is memorable to her is that the patient went on to talk movingly about how she guards against allowing anyone becoming important to her. For this patient, the danger is in allowing herself to become dependent on someone, or to want something from someone other than herself. I will not go into this patient's history in any great detail except to say that she was left by her father in a most painful way at the age of five. Very soon after this a sibling was born who was very ill for the first year of his life and this took most of her mother's attention.

I would like to dwell upon what happens at various moments in this clinical vignette. At one moment the patient is telling me of her contact with her friend and this makes her momentarily aware of an implication that I have become important to her. While she is telling me this, I note in myself some surprise and hope because I too am aware of this implication. She then becomes frightened and tries to leave the situation. I am able to perceive this as an expression of her anxiety and I also am able to think about the sequence of events which allows me to interpret her anxiety and link it with what she has just told me. I thus attempt to make her conscious of the reasons for her anxiety. She needs me to do this because being dependent is too frightening for her to consider and she blots it out of her mind by fleeing, or at least attempting to. (Significantly, she tries to flee to a situation which exactly reverses the one which frightens her so much in the session, i.e. to one in which she is the provider and her friend is the hungry one). I am able to hold on the thought that she is becoming more involved and dependent on me at the moment that she tries to flee from it. I act as what has traditionally been called an "auxiliary ego" and am able to offer her the thought to think about again via my interpretation. Her response confirms it, she tells me that she cannot bear to look at great need, and unconsciously she communicates that this

applies to her own need which I then again interpret in order to bring it to her conscious awareness.

The question is still begged: why should becoming conscious of conflicts be of any use? I will attempt to answer this question by returning to the three examples of professional "acting out" that I have already given.

The general practitioner who refers her patient with back pain does so despite, or perhaps because of, her irritation. One can imagine her taking this irritation more seriously and giving it thought. It may occur to her that she is irritated because her patient is asking for help which she knows will be of little value and this conflicts with her own need to be of use to her patient. Taking this further, she may formulate in her mind that the patient is asking for something but it is not for help with her physical symptoms. Her irritation may be a signal that the patient is asking for something which is outside the scope of expertise she feels she has. Given this awareness, various options might then decome open to her. She may refer the patient to a counselling service or a psychotherapy clinic. She may work in an area in which that sort of service is not available and that she herself does not have the resources to deal with the problem. She may indeed decide that a referral to a specialist is worthwhile in that it might give her patient temporary relief. Whatever she does, her clinical judgement will be surer if she makes it in a state of mind in which her irritation is one more diagnostic clue rather than one in which it makes her get rid of the patient as soon as possible.

A similar formulation can be made of anxiety that confronts the clinical psychologist with her very disturbed patient. She "short circuits" an exploration of her feelings by conceptualizing his problems into a framework that she already has in her mind. Although I do not intend to be critical of social skills training, I think it is extremely unlikely that it would be of any lasting benefit in the situation I have described. What then might the clinical psychologist experience if she did not slot the clinical problem into social skills model? One experience she might well have is that of a feeling of impotance. She might well feel overwhelmed by the enormity of her patient's problem and by the paucity of her own resources. However, if she can tolerate these feelings for long enough she may give thought to the situation that produces them. For example, she may wonder about the sort of health care system she works in which expects her to deal with such patients at an early stage of her career. She may give thought to the nature of the relationships between the disciplines in the setting in which she works that is enacted by such a referral. She might well realize that the impotence she feels is a reflection of an unconscious feeling of omnipotence in which she expects herself to be able to help all comers. It might well be that even after this period of thought she

nevertheless decides to include the patient in a social skills group. If she does, I think she does so in a very different state of mind. She is unlikely to harbor the illusion that the group will radically help the patient and she will thus have much lower expections of her contribution to the patient's life. This might free her to have realistic goals and this might in turn communicate to the patient that his therapist has some understanding of the scale of his difficulties.

My third example was of the hospital management team. I would imagine that their decision to build a partition is a response to a sense of fear and a natural wish to protect their staff. It is a particular fear and again I wish to argue that were it recognized and thought about, other ways of dealing with the anxieties might be found. For example, the measure they take is to make a very concrete boundary which patients cannot cross. It might then follow that the patients who threaten violence do so because they wish to break through the boundary between them and medical help, and that the receptionist symbolizes this boundary. Given this understanding one might then look at what measures are taken to ease patients' anxieties that they will not be given help or that the help will come too late. Clear communication about waiting time, for example, may be a more valid goal than the shatter proof glass, which indeed may increase the attempted attacks upon the staff.

I have attempted to outline a model in which anxiety is a signal of a potential awareness of an emotional state that is perceived as very uncomfortable or dangerous. The general practitioner's irritation, the psychologist's impotence, the hospital management team's fear, and the patient's dependence all fall into the category. The model implies that when such a situation occurs the patient will experience anxiety and may seek professional guidance. There is a further implication which I have tried to spell out and that is that if such a situation develops in a professional setting, which I am sure happens all the time, then the clinical judgement of the professional will be impaired.

THE FREE-FLOATING CONCEPT OF ANXIETY

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INTRODUCTION

The language of psychology is a semantically fearsome thing. It is a gross mix of words from traditional folk psychology given a pseudo-technical veneer (perception, motivation, aggression, attitude and so forth), jargon imported from neighboring disciplines (feedback, reflex, figure-ground, instinct and so forth) and concepts generated by specific theoretical frameworks (transference, reinforcement, closure, life-space and so forth). It contains terms which are only clearly defined by narrow experimental or test procedures but which carry vast auras of extended meaning - spatial intelligence, authoritarian personality, habit strength, short term memory and so forth. The whole mongrel vocabulary is further splintered, by academic and professional vested interests, into mutually exclusive sub-languages. For example, the working language of physiological psychology can, in no way, communicate with the working language of social psychology. Though officially speaking from within the same "science" the two specialisms have no more in common than have, say, biology and economics.

ANXIETY

"Anxiety" is a prime example of the kind of tortured concept which bedevils the language of psychology. It is a traditional concept taken from lay language, given a veneer of "precision", and cluttered with borrowings from the neighboring discipline of physiology so that "physiological reactions" to anxiety have virtually the same semantic status as "anxiety" itself and are operationally defined by procedures as unrelated as manifest anxiety questionnaire scores and polygraph readings.

Yet it seems likely that in spite of all this "scientific" polishing of the concept of "anxiety", its popularity and attraction as a term within the formal discipline of psychology may still derive mostly from its traditional semantic power and pervasiveness within the public domain.

In lay language the notion of being anxious was defined as being "troubled in mind about some uncertain event", "being in disturbing suspense", "being concerned", "solicitous". Such definitions pointed to a powerful and easily recognized aspect of human experience: so much so that anxiety was commonly reified and achieved "thing" status. This carried over into psychology in the form of posing logically inverted questions of the type "How does your theory account for anxiety?" in place of the logical question, "What does the concept of anxiety account for?".

Once imported into psychology and psychiatry "anxiety" was given a multiplicity of (often contradictory) defining characteristics. The general effect of re-defining was to detach anxiety from particular personal experiences and define it as a "state". It became more like the German angst, referring to feelings aroused by the anticipation of a vaguely fearsome future. Thus anxiety could refer to marked and continuous fear or (contrastingly) a continuous fear of low intensity. In behaviorist theory, anxiety was defined as a secondary drive for which the establishing operation is the acquisition of a specific avoidance response, the symptom of which is that the stimulation of the anxiety response depresses the rate of the responses usual in the situation and produces other behaviors inappropriate to the situation. In psychoanalytic theory it could refer to a sense of threat derived from conscious or unconscious conflict or more specifically (as in primal anxiety) to anxiety arising in infancy in connection with separation from the mother at birth and consequent repression. Trait psychologists concretised anxiety into a measurable aspect of personality (as in manifest anxiety scales) and it was given any number of modifiers as in eroticised anxiety (where the person heads towards a threatening situation and enjoys doing so), free-floating anxiety (attached to almost any situation or activity of the individual), oral anxiety (that is anxiety aroused in the oral stage and said to be represented later by fantasies of an immense object in small pieces inside the body) and so on and so forth.

Any single concept is defined by the network of constructs which both imply it and are implied by it and the clarity of its definition is a function of the clarity of the network links. In science, we construct theoretical frameworks to provide a net of meanings for particular concepts and recognize that if our theoretical framework is ambiguous, multilingual and inchoate then the definition of any single term will inevitably share this ambiguity. From this point of view, we have not so much defined anxiety as described it, i.e. we

have added to its list of "properties" so as to multiply the occasions when we can point to "anxiety" without regard to the internal contradictions and unrelatedness of the increasing pile of allegedly defining characteristics.

The semantic overload on the term rapidly reached a point at which psychological dictionary compilers (e.g. English and English, 1958) commented in the following terms. "When a term is frequently employed in behavioristic learning theory, in psychoanalysis and in nearly every field of psychology between them, the variety and shadings of meaning become very troublesome. Anxiety must be read with great vigilance for an author's meaning or, more often than not, his several meanings." Even this seems something of an understatement.

THE DIS-INTEGRATION OF PSYCHOLOGY

In taking the traditional concept of "anxiety" into its language, psychology inevitably incorporated the very extensive assumptions and implications which are tied to the concept. In particular it accepted the traditional, cultural distinction between thinking and feeling since "anxiety" is defined as a feeling and its definition therefore entailed the superordinate distinction. The superordinate construct of thinking versus feeling in its many forms (cognition versus emotion, reason versus passion, head versus heart) has been so long embedded into our culture that it is often regarded as a state of affairs rather than as an interpretation of human nature. Its acceptance within the discipline of psychology has split the discipline so that (whatever the theoretical framework) we always have two psychologies, a psychology of cognition and a psychology of emotion. Each psychology has a language appropriate to it and there are a whole series of problematics when we attempt to relate the two. In fact, the bipolar nature of the construct, thinking versus feeling, causes them to be seen dichotomously as mutual contradictors or inhibitors, i.e. cognition as a controller of emotion or emotion as a disrupter of cognition (Bannister, 1977).

Thus, both psychoanalytic and behavioral theoretical frameworks conceptualise anxiety as a force within the human system which is only related to the directional (cognitive) aspect of the system in the sense of energising or distorting it. The notion of "anxiety" buttresses all that dominant group of models in psychology which are essentially hydraulic.

One of the most radical aspects of Kelly's (1955 and 1979) formulation of personal construct theory was his rejection of the superordinate dichotomy of thinking versus feeling, in an attempt to offer a unitary basis for his psychology. His intention was made explicit (Kelly, 1979):

"The reader may have noted that in talking about experience I have been careful not to use either of the terms emotional or affective. I have been equally careful not to invoke the notion of cognition. The classic distinction which separates these two constructs has, in the manner of most classic distinctions that once were useful, become a barrier to sensitive psychological enquiry. When one so divides the experience of man, it becomes difficult to make the most of the holistic aspirations that may infuse the science of psychology with new life, and may replace the classicism now implicit even in the most behavioristic research."

Thus, within personal construct theory, the kinds of concepts which traditionally refer to "emotion" (anxiety, aggression, hostility, guilt and so forth) are redefined as constructs which relate to transition. "Emotional" issues for Kelly are issues to do with change or resistance to change within construct systems. Bannister (1977) puts it thus:

"The underlying argument is that, while a person's interpretation of himself and his world is probably constantly changing, to some degree, there are times when his experience of varying validational fortunes make change or resistance to change a matter of major concern. At such times we try to nail down our psychological furniture to avoid change or we try to lung forward in answer to some challenge or revelation by forcefully elaborating our experience. We may be tumbled into chaos because of over rapid change or move into areas where we cannot fully make sense of our situation and its implications and our system must either change or the experience will become increasingly meaningless. It is at such times that our cenventional language most often makes reference to feeling."

SPECIFYING ANXIETY

Kelly sought to give "anxiety" an exact and defined position within the framework of personal construct theory. He defined it as "an awareness that the events with which one is confronted lie mostly outside the range of convenience of one's construct system."

Each term within this definition can, in its turn, be defined within personal construct theory. A construct is a bipolar discrimination which may be held at any one of varying levels of awareness and which may or may not have an equivalent verbal label. It is part of a person's system for interpreting or making sense of their own nature and the nature of their world and situation. It is not a label but a discrimination on the basis of which the future is anticipated, choices are made and action is undertaken and monitored.

Kelly argues that any single construct has a finite range of convenience: there are a limited number of events to which it is

applicable and there are many other events which cannot be made sense of in terms of the construct. Thus the construct "two stroke versus four stroke" aids us in sorting out some aspects of motor cycles but is not often seen as clarifying the mysteries of chess or landscape gardening. Just as a construct has a limited range of convenience, so as construct sub-system or the whole of a person's construct system can be seen as having a limited range of convenience.

For example, some may develop "social and interpersonal" constructs which enable them to interact more or less effectively within their family and immediate intimates but which are deficient in implications for larger social situations of the party/disco type. Others may have extended their constructions to allow them to anticipate and make elaborative choices within the party/disco type of situation yet be unable to extend the range of convenience of their constructions to deal with public situations which involve presenting (acting, speaking, singing) to a larger audience. Whether a person will be anxious or not is a complex function of their ability to make sense out of, understand the implications of and anticipate forthcoming events within the situations with which they are confronted. It should be noted that they can at least make an initial construction of the anxiety provoking situation in the sense of recognizing that they are confronted with "it" - if they failed entirely to construe "it", "it" would arouse no anxiety because for them "it" would not exist. We are not anxious about the totally unperceived cliff edge. We are anxious about things that go bump in the night because we have construed their bump-like and night-time qualities; what we are uncertain of is the implications of, appropriate response to, further events likely to follow, "things that go bump in the night".

A characteristic which Kelly's definition shares with our common understanding of anxiety is its reference to the presence of ambiguity, confusion and mystery. Thus at one level the person is aware of an immediately unpredictable future and at another level is aware of the failure of his or her construct system as indicated by their inability to predict. The intensity and duration of anxiety will depend upon the centrality, within the system, of the constructs which denote, but fail to make sense out of, the elements with which one is confronted. Consider, for example, the anxiety of some students when faced with academic examinations. Their anxiety is certainly not due to any failure to construe immediate and superficial aspects of the examination. They are fully able to comprehend examination instructions, the marking system, the need for balancing up time allotted to questions and so forth. What they may fail to understand and anticipate is contained within questions such as "What will other people think of me if I fail this exam?", "What will I think of myself if I fail this exam?", "What will be the implications for my personal capacities and my consequent future success if I fail this exam?" and so forth. Again, the degree of anxiety will depend

upon how central such constructions are for their core role construing - their construing of self.

ANXIETY AS COMMONPLACE

Clearly, in personal construct theory terms, anxiety is a normal aspect of life. Only those in very socially restricted, unvarying and over-protected settings can hope to avoid frequent meetings with situations that they cannot entirely construe: situations in which they cannot effectively anticipate what happens next and guide their actions in relation to such anticipations. The adolescent engaged in early sexual experiments is likely to experience extreme anxiety in that they are faced with a situation largely outside the range of convenience of their construing. They are undertaking sexual exploration equipped with a vague and contradictory assembly of constructs in terms of which sex is tempting, mystifying and threatening. Their construing may be tangled in contradictory implications which suggest that what they are about to engage in is simultaneously a sin, the gateway to incredible physical delight, th risk of fearsome disease, a proof of maturity, a hope of fantastic intimacy, the likelihood of personal failure and humiliation and so forth. Fortunately most adolescents follow Kelly's dictum that "Some measure of anxiety is seen as a corollary of adventure. When anxiety stifles adventure then it is time to do something about it."

DILATION AND CONSTRICTION

The many tactical responses we may make to anxiety can be grouped, in Kellyan terms, under two broad strategies: the strategy of dilation and the strategy of constriction. These are the broad psychological equivalents for the ancient responses of fight or flight.

Dilation occurs when a person broadens his or her perceptual field in order to reorganize it on a more comprehensive level. Thus we may seek to deal with our anxiety by exploring that which makes us anxious; we set up hypotheses in relation to the mysterious and test them out; we search for elements that are familiar within a broadly unfamiliar field. In short, we try to extend the range of convenience of our construing to include what was previously only very inadequately construed: we endure our anxiety while seeking to master its source.

The contrast pole of dilation is constriction. This occurs when a person narrows his or her perceptual field in order to minimise apparent incompatibilities. We can constrict by withdrawing from the anxiety-provoking situation and all like situations: we will never again go on the stage, argue with authority, go down a pothole, go to

a dance or whatever. We may constrict by opting for a narrow and concretist interpretation of what the "situation" is, thereby reducing it to the familiar and the manageable: and interpersonal relationship is nothing but smiles, polite patter, an occasional and formal evening out and a card at Christmas. In the short term, constriction solves the problems inherent in anxiety but, life being an intrusive business, it often fails as a long term strategy. As Kelly puts it, "Sometimes a person is so generally anxious that he spends all of his time running around putting out small fires and has no time to design any fire-proof structures."

ANXIETY IN THERAPY

In therapy, as in life, anxiety, like pain, can be both disruptive and informative. An anxiety-free client is one who is clearly under no pressure to elaborate or venture his or her construing and this raises the question of what purpose is being served by the therapy. Conversely, a client perpetually overwhelmed by anxiety is being forced to experiment too radically and may be plunged into chaos or forced to retreat into hostility (the attempt to extort validational evidence for social construing that is already proving a failure).

There are many short term tactics for alleviating anxiety. These include reassurance (the authoritative validation by the therapist of the client's overall construing); binding the anxiety to a specific time, place and situation, so that its long term implications are limited; using introspective review so as to distance the client to some degree from the anxiety (in this connection both loosening and tightening can be used in the sense that loosening a construction will make the client less sensitive to invalidating evidence and the tightening of certain constructs may regularise the client's predictions); circumspection may be used in order to help the client to see that a situation may be viewed from a variety of constructive angles, just as pre-emption may be used in order to help a client find grounds for taking action.

However, in the long term, only active elaboration into areas of ambiguity will both deal with the immediate threat to the construct system of the client and enable him or her to cope with further threatening situations. Such an elaboration of construing will involve both the client and the therapist in considerable exploration to locate the boundaries of the client's present construction and to ascertain the particular points at which it fails, the kinds of events which are problematic. This is no easy undertaking since by definition the sources of anxiety are not truly "known". Limited experiments need to be framed so that the client is not projected too far into areas of ambiguity. The aim is always to gain new evidence without increasing the anxiety to the point at which the client is

either plunged into chaos or retreats into long term constriction and hostility.

CONCLUSION

In essence, construct theory argues that all anxiety is about something. Anxiety should never be seen as free-floating or as a generalized condition or as a personality trait. The inevitable uncertainty of the person about the exact locus of their anxiety should never become a grounds for ambiguity in the definition of anxiety itself.

When we experience intense anxiety we understandably tend to withdraw from the issues that provoked it, issues that lie mostly outside the range of convenience of our construing. We may justify, label, make sense of, this withdrawal in any one of a number of ways and, strangely, official psychology has copied some popular arguments for constriction.

Thus we may "make sense" of our anxiety by attributing it to our constitution ("It's my nerves, doctor") and psychologists have followed this line of thought in trying to give anxiety the status of a personality trait. Alternatively, they have attributed it to historic sources in infancy which make it, for practical purposes, constitutional.

We can justify our withdrawal by arguing that there is nowhere to advance into and demand that our anxiety be treated as a complaint, e.g. demand to be given "confidence", which is the demand to have one's "anxiety" taken away. Again there is a danger of psychology following this by arguing from the effectiveness of procedures such as relaxation, which have immediate validity as short term aids, to the conclusion that anxiety itself is a generalized complaint.

Again, we may justify our anxiety by concretely assigning it to a single definable source ("going out", "wasps", "heights" or whatever), thereby arguing against the need for any more extensive exploration of the way in which our construing is failing us. psychologists have mimicked this constrictive reaction to anxiety by accepting the immediate locus given to anxiety as the true source of the anxiety itself, without reference to its implications for the personal construct system as a whole.

Anxiety is part of our awareness of the limitations of our personal interpretative capacity - it serves to remind us of the ongoing quarrel between our preception of life and life itself. It denotes our sensitivity as well as our ignorance.

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PSYCHOLOGICAL APPROACHES TO PROBLEMS OF AGGRESSION AND VIOLENCE

PSYCHOLOGICAL APPROACHES TO PROBLEMS OF AGGRESSION AND VIOLENCE: AN INTRODUCTION

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We are regularly reminded by the media that crime in general, and violent crime in particular, is increasing. Certainly, this is the message of the official crime statistics. Almost three times as many serious crimes were recorded in Britain in 1982 as in the mid-1960's, and violent crimes, such as wounding, robbery, or rape have more than kept pace with this increase. Similar increases have been recorded in other countries. We are accustomed to hearing that North American Society is more violent than our own, but even in the United States, the chances of being the victim of a major violent crime almost tripled between 1960 and 1976 (Silberman, 1978. The occurrence of street rioting in several major British cities in the summer of 1981 added further fuel to the belief that we live with the prospect of increasing violence, and it is perhaps not surprising that in recent opinion polls as many as 20% of respondents have indicated that they feel the law and order is the most serious issue facing Britain today.

Society's preoccupation with violent crime is, of course, one reason for the interest of psychologists in violence, and as this symposium attests, applied psychologists are now paying more attention to those whose behavior is identified as problematic because of its harmful social consequences. It is not, however, the only reason. Criminal violence constitutes only a small part of the wider and universal phenomenon of aggression, and despite the negative connotations of the term, aggression among humans is neither statistically abnormal, nor, for the most part, is it illegal. Our conceptualizations of violence are therefore highly dependent on our understanding of aggression as everyday behavior.

It seems true to say that clinicians, whatever their discipline, have so far demonstrated little capacity for influencing violent people. A major reason has undoubtedly been the popularity of theories which assume that aggression is a biological inevitability. Many biologists and psychiatrists still share with the man in the street, and a moralizing judiciary, the Hobbesian view that human aggression is a residue of our animal ancestry, constrained only by the civilizing veneer of conscience or self-interest. In this light, violence is a random, purposeless and pathological eruption of primitive forces, not amenable to change, but at best subject to control by incarceration, drugs, psychosurgery, or perhaps psychotherapy.

For some time, this pessimistic view has been challenged by psychologists, but until comparatively recently, the claim that human aggression is learned behavior has been little more than a pious dogma. However, revised formulations of aggression began to appear in the early 1960's (e.g. Buss, 1961; Berkowitz, 1962; Bandura and Walters, 1963) and they provided not only new conceptual frameworks but also laboratory based methodologies for the study of aggression. They ushered in a new era of research on aggression which has focused on its more distinctly human aspects, and which has resulted in empiral support for the view that aggression is essentially problem-solving behavior occurring in an interpersonal context (e.g. Bandura, 1973; Tedeschi, Smith and Brown, 1974; Zillmann, 1979). This approach is implicit, if not explicit, in the contributions to this symposium.

The burgeoning psychological literature on aggression is formidable. By the mid 1970's articles were appearing at the rate of about 200 year (Stonner, 1976), and I can claim familiarity with only a small fraction of these. However, by way of introduction to this symposium, I shall attempt a brief over-view of the way in which psychological thinking about violence and aggression is developing.

First, I would like to examine the question of the extent of violence. The publicized increase in violent crime is obviously of relevance to behavioral science, since it implies significant changes in social behavior. It is also of relevance to the extent that it influences the availability of research grants and employment opportunities for psychologists! However, at the outset, we need to consider whether we really live in a violent society, or whether this is little more than a well-worn cliché.

Most non-accidental destruction of human life results from collective violence such as international wars, revolutions, riots, and so forth. These are not new to the twentieth century, but appear to be normal insofar as they have occurred with some regularity throughout history and in all cultures. Williams (1981) notes that between 500 BC and 1925 there were 967 major interstate wars in Europe alone. While the two world wars accounted for nearly 90

million deaths, mass destruction on this scale is not unique to the present century. The Taiping Rebellion resulted in an estimated 20 million deaths between 1850 and 1864, and in South America, war from 1865 to 1870 produced casualties in 80% of the population of Paraguay (Williams, 1981). Violence on a massive scale, then, is not confined to recent generations.

For reasons I shall refer to in a moment, more public concern is expressed about individual violence, and the official crime statistics are the usual source of claims about an escalation in the frequency of violent behavior. In fact, these figures exemplify Disraeli's aphorism that there are lies, damned lies, and statistics. To begin with, they are notoriously subject to distortion through selective reporting. While the rate of increase in recorded crimes of violence has been steeper than that for crime as a whole, it is not uniform across all forms of violence. Sexual offences (most of which do not in fact involve the use of force) have increased by about a fifth over the past two decades (Walmsley, 1979), in comparison with the threefold increase in recorded crime generally. During the same period, rape offences have more than doubled, but they still account for less than 5% of all sex crimes, and have increased at a slower rate than other crimes of personal violence, such as wounding or robbery.

However, criminal statistics do not provide a reliable guide to either the volume of crime committed or to the underlying trends over time. What is recorded as crime is dependent not only on what is reported to the police, but also on what the police record and the way in which they classify it. A recent example illustrated how misleading the resulting figures can be. The occurrence of two sensational armed robberies in a short space of time resulted in media attention being focused on a dramatic increase in "armed offences." A television news report noted that such offences increased from 1734 in 1971 to 8067 in 1981. A more sober inspection of the figures in The Guardian noted that while they included a threefold increase in armed robbery, this accounted for less than a quarter of the 1981 figure. The increase, in fact, was largely due to a hundredfold increase in the offence of criminal damage, which does not entail personal injury, and which typically involved teenagers taking potshots at empty cans or buildings with an airgun. The increase in 'armed offences' was largely a reflection of the way in which this particular offence was defined and recorded.

While, then, it may well be the case that we are exposed to more violent crime than were previous generations, there are reasons to believe that the extent of the increase may have been exaggerated. Perhaps the most significant reason is that we do not know for certain how many violent crimes have actually occurred in the past. It has long been known that the official statistics conceal a 'dark figure' of unrecorded crime, and considerably underestimate actual

occurrence. This has recently been confirmed by the British Crime Survey (Hough and Mayhew, 1983). The survey inquired about the experience of criminal acts during 1981 in a large sample of the adult population. Estimates of the occurrence of violent crimes (wounding, robbery and sexual offences) indicated five times as many incidents as were recorded by the police. Interestingly, Hall (1982), working from different data, has arrived at a comparable estimate of the extent under-recording of 'dangerous' offences in the United States.

Nevertheless, the actual figures must be seen in perspective. The British Crime Survey suggested that on average, 1 in 10 households owning motor vehicles in England and Wales experienced theft from their vehicle, and 1 in 40 had their vehicles stolen. In the case of violent crimes, 1 in 100 of the population experiences assault resulting in injury (mainly slight), 1 in 240 was subjected to an attempted or actual robbery, and among females aged 16 and over, 1 in 620 was the victim of a sexual assault (only one rape was actually recorded in the survey sample). These are very gross averages,and different categories of people face different risks. For example, those most likely to be victims of physical assault were young, single men who spent several evenings a week in a bar, and who themselves were more likely to assault others. Moreover, the survey revealed that 'fear of crime' may be quite out of proportion to the risk. While the elderly fear most for their personal safety after dark, they are the least likely to be victims of street crime.

A further point is that the number of violent crimes is not a reliable indicator of the number of violent criminals. Some crimes may be committed by several criminals, but on the other hand, a number of criminals commit more than one offence. In the Philadelphia birth cohort study, for example, 6% of the sample of 10,000 boys decame 'chronic' offenders. They accounted for less than a fifth of all delinquents, but were responsible for more than two-thirds of all homicides, rapes, robberies and aggravated assaults (Wolfgang, 1975).

Williams 'commenting from an American standpoint' has noted: "The miracle of organized society is not that there is so much impulsive or spontaneous interpersonal violence, but that there is so little" (Williams, 1981, p.44). The fear of violence is, perhaps, as deserving of psychological attention as is violent behavior itself.

Although violent crime would appear to be the most visible index of individual aggression, it is of course, by no means the only form of violent behavior. In everyday currency, violence denotes the threat of application of force which has harmful consequences. Aggression is used rather more broadly to include any behavior involving harm or injury. Neither term describes behavior in any topographic sense. The categories of violent crime, such as robbery, wounding or rape, likewise refer to aversive consequences for the

victim rather than to a specific form of action. Identifying behavior in terms of its aversive effects raises serious conceptual problems.

First, what we choose to identify as harmful or injurious is highly dependent on value judgments. The use of a cane by a schoolteacher, the shooting of a recalcitrant suspect by a policeman, or the spanking of a child by its parent, would all appear to fit with definition of violence. Yet in practice, people are less likely to identify such events as violent. The reason, of course, is that they are legitimized by society. Conversely, some acts are categorized as violent when they offend moral or political values. During the Vietnam war, many Americans identified student demonstrations and the burning of draft cards as violent (Blumenthal, Kahn, Andrews and Head, 1972). The dumping of toxic waste by a chemical manufacturer may similarly be described by some as 'capitalist violence'. As Tedeschi et al. (1974) note, "no action can be identified as aggressive or violent without taking into account the value system of the perceiver" (p.557). The labelling processes by which violence is legitimized have received some attention from psychologists. Bandura (1973), for example, describes a number of verbal devices which are commonly used to neutralize the injurious consequences of aversive behavior, such as displacement of responsibility, attribution of blame, dehumanizing of victim or misrepresentation of the consequences. Bandura, in fact, incorporates social labelling into his definition of aggression, being prepared to accept as aggression "injurious and destructive behavior that is socially defined as aggressive." There may be some virtue in this pragmatic approach, but it fails to provide us with a non-arbitrary reference point.

A further problem is that the focus on aversive consequences logically requires us to includes accidental injury or harm, such as that resulting from motor vehicle collision. One solution is to introduce the notion of intent to harm. This is only partially successful, however. A surgical operation, for example, entails intentional injury, even though the long term intention is to benefit the patient. Some psychologists accept this consequence, and are prepared to include such behavior under the rubric of aggression as a pure form of 'instrumental' aggression (Olweus, 1973). However, to include surgery under the same heading as robbery is to ignore the different motivational circumstances involved. It makes some sense to distinguish benevolent and malevolent intent in this instance. The difficulty remains that what is benevolent for the point of view of the actor may well be malevolent from the viewpoint of the victim or an observer. We have shifted the emphasis from the aversive consequences of an action to its motivational antecedents, but the problem of social evaluation remains.

More is at stake than semantic purity, since the reliability and validity of any statements we make about aggressive behavior are

dependent on the agreed functional equivalence of the various behaviors described as aggressive. Psychologists have attempted to come to grips with these issues, but while the variety of operational measures currently in use in laboratory research on aggression indicates ingenuity, it also indicates limited consensus as to the phenomena of interest. The famous Bobo dolls, for example, continue to be used in investigations of aggression in children (e.g. Hayes, Rincover and Volosin, 1980). Bobo dolls, however, do not threaten, cry out, or retaliate, nor do social norms forbid assaults on them. They may usefully provide information about the acquisition of vigorous and prosocial behavior in children, but they are a far cry from the victims of violent delinquents. As Stonner (1976) observes, most research in the area of aggression remains laboratory-specific or paradigm specific.

However, this is not to deny that some conceptual sharpening has taken place. Buss (1961) has been particularly influential in this respect, partly because of the ensuing controversies resulting from his original conceptualization. Rejecting the utility of any teleological notions of intent, he defined aggression as "a response that delivers noxious stimuli to another organism." He went on to distinguish aggression according to whether it was reinforced by the suffering of the victim (angry aggression) or by some other extrinsic rewards (instrumental aggression). He also distinguished between physical, verbal, passive and indirect forms of aggressive responding. Anger, he noted, is an emotional state which is neither necessary nor sufficient for the occurrence of aggressive behavior. Further, hostility was distinguished as a dispositional term referring to implicit and negative verbal labelling of others.

With the notable exception of Bandura (1973) however, most psychologists have regarded intent as an indispensable component in the definition of aggression (Berkowitz, 1962; Feshbach, 1970; Olweus, 1973; Tedeschi et al., 1974; Zillmann, 1979), mainly to restrict the term to behavior involving non-accidental harm or injury, and to permit the inclusion of unsuccessful attempts at injury. Identifying intent, however, remains problematic, since it is a hypothetical construct, which can only be inferred presumptively from antecedents or on the basis of retrospective self-report. A novel approach is that of Tedeschi et al. (1974). Noting the value implications of current concepts of aggression, they suggest abandoning the term. They propose instead the notion of coercive power, i.e. the use of threats or punishment to gain compliance, a concept which they feel overcomes the problem of social evaluation, and provides a referent for most of what is currently covered by the term aggression. It has been objected that the notion of coercion entails as much evaluation as does aggression (Stonner, 1976; Zillmann, 1979). However, the concept has much appeal, since it emphasises both the interactional nature of aggression and the motivation of the aggressor. Recent definitions of aggression in fact appear to incor-

porate the notion of coercively obtained compliance by specifying aggression as intentionally harmful or injurious behavior directed against a person who is motivated to avoid it (Baron, 1977; Zillmann, 1979).

Bandura is also in a minority in rejecting the distinction between angry (or hostile) and instrumental aggression. He argues that all injurious behavior is instrumental in producing desired outcomes, and also that the assumption that injury is reinforcing to an angry person is gratuitous. Pain cues may inhibit aggression whether the assailant is angry or not. However, Zillmann (1979) points out that cues which terminate an aggressive behavior sequence could still reinforce the recurrence of that behavior. He proposes that the alleviation of aversion and the attainment of positive rewards entail different classes of objective. He favors retaining the distinction on motivational grounds in the contrast between annoyance-motivated and incentive-motivated aggression.

Zillmann (1979) also distinguishes aggression as the infliction of physical injury from hostility as the infliction of nonphysical harm, arguing that the commonly assumed functional similarity of these two forms of behavior has not been established empirically. As he puts it, "It cannot be reasonably assumed that human aggression is generally motivated by a desire to bring suffering to the victim" (p.31). Although Zillmann does not in fact offer a separate theory of hostility, and the model he develops applies interchangeably to the two categories, the point is an important one which highlights a continuing weakness of current concepts of aggression. As a result of incorporating notions of intent or goal-seeking into their definitions, psychologists are forced to assume an equivalence of goals, which they may not possess. Zillmann's solution, however, is itself unsuccessful by the same token. Injury-infliction takes many forms which achieve different effects on the victim. Kicking, slapping and stabbing, for example, produce different amounts of pain, tissue damage and physical incapacitation. Similarly nonphysical harm may entail removal of possessions, social ridicule or deprivation of expected outcomes. The effect on the victim may include expressions of anger, embarrassment, or depression. We do not know whether these serve similar ends for the perpetrator and simply differ in terms of intensity or opportunity for occurrence, or whether they are seen as functionally different by the actor. We are therefore in no better position to identify two categories rather than one or ten or more. The apparent communality of aversiveness or suffering seems for the moment sufficiently parsimonious to warrant retention of a single broad category.

I suspect that Bagshaw and Owens (this symposium) would argue that the question could be answered by functional analysis, i.e. by demonstrating that if different consequences for the recipient were equally reinforcing for the same set of assailant behaviors, we could

assume that we had reliably identified a single operant or response class of aggression. However, this could only be done by adopting Buss's early, more strictly 'objective' criterion of an aggressive response. This analysis would not satisfy psychologists such as Baron (1977) or Zillmann (1979) who specificy goal-directedness or 'seeking to inflict injury' as a necessary criterion of an aggressive response.

The problem lies not in the attempt to infer intent (although we may question the psychological utility of the term). In practice, we can probably more often than not reach reliable consensus that A 'meant to', 'intended to' or 'deliberately' hit B, and it is perfectly legitimate to make such statements to discriminate A's behavior from sheer carelessness. What we cannot say with any certainty is that A intended to inflict injury. Nor can we legitimately say that injury reinforced the injury-inflicting behavior.

The point at issue is that available definitions still define aggression from the observer's point of view and fail to deal adequately with the perspective of the actor, as Tedeschi et al. (1974) point out. Skinner (1969) regards the actor's perspectives, such as feelings, meanings or attributions, as 'collaterals', unnecessary to account for the occurrence of aggressive behavior. The critical contingencies are 'signs of damage'. Apart from the fact that signs of damage do not typically reinforce aggression (Zillmann, 1979), the assertion seems tautologous and trivial, since the signs of damage are necessary preconditions for identifying behavior as aggressive. Similarly, the inference of intent to inflict injury, even if inferred from the presence of antecedent aversive events, is only evoked when injury-infliction takes place. Whether we use the language of goals, intents, motives or reinforcing consequences, observation of injury-infliction alone does not permit us to specify what the behavior achieves for the actor which ensures its future occurrence. If we did not know that the man extracting a tooth to the accompaniment of signs of damage in the 'victim' was a dentist, we would have no reason to exclude the behavior from the category of injury-infliction. In fact, of course, the dentist interprets his action as the restoration of health.

In this example, it is difficult to see the dentist's beliefs or the meanings he attaches to his behavior as 'collaterals'. Despite inadequacies in the definition of aggression, investigators have found it increasingly necessary to include cognitions in the form of attributions of intent or legitimacy, anticipated consequences, beliefs or connotative meanings in accounting for harmful behavior. Bandura (1973) has demonstrated that expectations of outcomes and self-administered rewards and punishments can dominate the influence of external contingencies in controlling aggression. Feshbach (1970) proposed that restoration of self-esteem is a common motive (? reinforcer) for aggression, and in Toch's analysis of violent behavior in

delinquents both 'self-image defending' and 'self-image promoting' were common features (Toch, 1969). Particularly pertinent in this respect is the work of Howells, described in this symposium. He has demonstrated that what reinforces the behavior of many rapists is not the attainment of sexual gratification but rather the infliction of humiliation and degradation. In these terms, then, and aggressive act is mediated by its anticipated consequences and the meanings attached to it. This does not, of course, deny the role of external contingencies in the acquisition of aggression, but such approaches demand that we determine under what conditions cognitive mediators may override the available contingencies. Zillmann (1979) has developed such a model of aggression in which control by environmental contingencies is postulated to be maximal at high and low levels of arousal, but cognitive control is maximal and dominant at intermediate levels. He suggests that most violent crimes are impulsive acts largely under aversive stimulus control.

The relation between arousal and cognitions now occupies a central place in theorizing about aggression. However, the developing interest in cognitive mediation has led to a shift of emphasis towards the characteristically human and social features of aggression, and a gradual rejection of assumptions of phylogenetic continuity in aggressive behavior. Lorenz's claims about the biological basis of human aggression (Lorenz, 1966) rested largely on extrapolations from research on lower vertebrates, and have found little favor among psychologists. March (this symposium) demonstrates the value of an ethological approach to the analysis of group aggression, and highlights the role of social signals in promoting such behavior. However, universal releasers of aggression have not, to my knowledge, been identified in man. Furthermore, although the human capacity for cognitive rehearsal permits the arousal or perpetuation of a state of annoyance in the absence of an external stimulus, there is no support for the hydraulic concept of aggression, there seem few parallels between human and nonhuman aggression. The use of tools to assist offensive aggression, the killing of other species for non-food related reasons, and the capacity for revenge are all uniquely human (Tedeschi et al., 1974; Zillmann, 1979).

Nevertheless, biologically oriented approaches persist. These are largely confined to some psychiatrists and neurologists who regard violence itself as pathological, and believe that in many individuals violence is a direct result of brain disease (e.g. Mark and Ervin, 1970; Monroe, 1978). The claim rests to a large extent on stimulation and ablation studies of nonhuman primates, backed up by clinical studies of patients with focal brain lesions. The evidence has been criticized by both neurologists and psychologists, and has been the subject of virulent attack by some sociologists. The debate has been a political one in which the use of drugs and psychosurgery to control violent behavior is portrayed as an establishment solution to social problems. However, the possible association between brain

dysfunction and heightened aggressiveness demand empirical investigation. There is evidence for an increased incidence on neuropsychological deficits in aggressive criminals (Spellacy, 1978), and psychophysiological differences have been demonstrated between subgroups of violent offenders (see Blackburn, 1980). However, such data is correlational and open to several interpretations. The nature of the relationship merits closer analysis.

Psychological theories now typically view aggression as a learned reaction to environment events, but the drive concept continues to occupy an energizing role in theoretical explanations. The possibility of unlearned factors has been entertained by some. The rage reaction is commonly regarded as an unlearned expressive pattern of behavior, and Skinner (1969) regards aggression accompanied by autonomic arousal as 'phylogenic'. Similarly, he considers it likely that there is an innate capacity to be reinforced by damage to others. Berkowitz (1969) somewhat similarly proposes a concept of reactive drive, seeing an unlearned pattern for anger arousal, and innate connections between anger and aggression which become modified by experience. Bandura (1973), however, adopts a Hullian concept of generalized drive, and rejects the notion of any special relationship between anger and aggression. Aversive experiences according to his model, produce a general state of emotional arousal which facilitates any coping behavior which is prepotent. Such a view is consistent with the notion that violent offenders may often be people who have a limited range of coping skills other than aggression (Toch, 1969).

While there is some support for Banduras view that aggressive behavior can be facilitated by non-angry emotional arousal, there is also clear evidence that a state of anger does make aggression more likely under certain circumstances (Rule, and Nesdale, 1976). The limiting conditions are the cognitive attributions people make about the sources of aversive experience and their appraisals about how they can cope. Increasing understanding of the reciprocal relationships between these variables is reflected in the development of cognitive-behavioral procedures for facilitating the self-regulation of anger (Alves, this symposium).

Despite differences of detail, recent formulations of aggression suggest a growing theoretical convergence. For the present, we have to live with conceptions of aggression and violence which are distinctly blurred at the edges, and our understanding of events whose violent nature is a matter of some consensus remains fragmentary. We have, however, moved some way from the blinkered concept of violence as "unwarranted and unprovoked acts" (Mark and Ervin, 1970). Violence may often occur apparently unannounced, but it is a social reaction, which occurs when people lack alternative non-coercive options, or believe that other options are not available to them. Whether it is associated with crime, mental disorder, or family conflict, violence recurs because it is useful behavior. Changing

its utility remains a daunting task for the clinician, but the promissory notes are beginning to appear (e.g. Bornstein, Hamilton and McFall, 1981). The contributions to the symposium illustrate some of the methods by which we may redeem them.

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CLINICAL ASPECTS OF SEXUAL VIOLENCE

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Recent years have seen an increasingly detailed and sophisticated psychological contribution to the understanding, assessment and treatment of deviant sexual behavior (Barlow, 1974; Abel et al., 1978; Crawford, 1979, 1981; Perkins, 1982, 1983a, 1983b). In this chapter I intend not to review this large body of work in its totality, but to isolate and discuss a limited number of issues which seem to me to have important implications for clinical practice. The main focus will be on sexual behavior which can be described as 'coercive', that is, behaviors involving the use of physical force, or the threat of physical force, by one person to produce physical intimacy with another. The majority of the studies that will be referred to will have focused on rape (coerced vaginal-penile intercourse) and rapists, though it is likely that many of the conclusions of these studies can be generalized to forms of sexual assault which do not involve intercourse. Coercive sexual behavior involving child and male victims is not included in the present discussion. Both these forms of sexual deviance are sufficiently distinct to require separate analysis (Cook and Howells, 1981; Lockwood, 1980).

The three areas of work I shall assess in terms of relevance for clinicians are: 1) work relating to physiological sexual arousal; 2) studies of aggressive motivation; and 3) recent research into the cognitive and attitudinal components of sexual violence. It is important to point out one obvious but important bias in many, though not all, of the studies to be discussed. The major part of empirical work is based on convicted offenders found in prisons, forensic evaluation clinics and secure psychiatric institutions. Such offenders are the survivors of a series of potent filters operating in the community and in the criminal justice system. The most powerful

filter is the non-reporting of rape incidents. Victim surveys consistently reveal that many more rapes occur than feature in official statistics (Hindelang and Davis, 1977; Russell, 1982; Koss and Oros, 1982). Subsequent filters operate when many sexual offences are not 'cleared up' by the police or fail to produce a conviction for a number of other reasons. Convicted offenders in institutions are thus likely to be a skewed and unrepresentative sub-sample of those actually engaging in such behavior. It follows that caution is necessary in generalizing from studies conducted with these populations.

PHYSIOLOGICAL SEXUAL AROUSAL

The assessment and modification of patterns of sexual arousal have been major themes in psychological studies of sexual violence. Research of this sort has flourished, in part, because of the availability of a technology for assessing sexual response in an objective and apparently reliable way. Of the various physiological changes that accompany sexual arousal in males, changes in penile volume and penile diameter have proven to be the most valid and most capable of assessing sexual preference (Crawford, 1980; Laws, 1983). Penile responses can be measured in response to a wide range of stimuli including slides, audio-taped verbal description, moving films and internal fantasy, though film and video stimuli produce the highest levels of arousal (Abel et al., 1981; Laws, 1983). The critical question for researchers in this field is whether or not sexual aggressors, such as rapists, differ from normals in their patterns of sexual arousal. This question has important clinical implications. If rapists were shown to be more aroused by depictions of rape, then non-rapists, it would be plausible (though not necessarily correct) to suggest that this differential arousability played some role in explaining the rape behavior. It might be argued that rapists rape, in part, because they find such behavior more arousing than do controls. The finding of a difference between rapists and normals might also be regarded as important by some clinicians in providing a possible objective means of predicting the likelihood of a person engaging in rape behavior in the future. Two sorts of prediction might be relevant. Deviant patterns of arousal in a person who has not previously raped could suggest that such behavior is a future possibility, or deviant arousal in a person who has already raped might mean that the behavior is likely to be repeated. Those attempting such predictions would emphasize, of course, that multivariate rather than univariate methods are required and the other variables would need to be taken into account. In most clinical situations the first kind of prediction (new behavior) is likely to be less common than the second (repeated behavior). Laws (1983), amongst others, has argued strongly for the use of arousal measures in the prediction of sexual dangerousness in this way. Finally, an arousal difference between rapists and non-rapists would also have

implication for treatment. If rapists have abnormal patterns of sexual arousal it is logical to focus therapeutic attention on changing sexual arousal patterns themselves. If rapists are no different from non-rapists in their arousal patterns, then a different treatment strategy is required (see below). It should be clear from this discussion that it is important to establish whether deviant and normal groups differ.

The Evidence

The most forceful evidence that rapists do differ in their patterns of arousal is provided by Abel and colleagues (Abel et al., 1977). In this study rapists' and normals' arousal to two-minute audio-taped verbal descriptions of either mutually consenting sex or to rape depictions were assessed. The general finding was that rapists were equally aroused by rape and mutually consenting sex, while non-rapist control were less aroused by rape than by consenting stimuli. A 'rape index', computed by dividing erection to rape stimuli by erection to mutually consenting intercourse, was more effective in discriminating rapists from non-rapists than erection to rape stimuli alone. These conclusions need to be viewed in the light of two important facts. Firstly, the control group in this study consisted of males who were sexually deviant but not rapists. Secondly, some of the rapists in the study has raped more than 100 times and were, thus, untypical of rapists as a whole.

Barbaree et al. (1979) replicated this study using a more adequate (but still biased) control group - graduate students. In this experiment the rapists showed no difference in arousal to consenting and rape stimuli, whole control subjects responded more to consenting than to rape stimuli. The controls did, nevertheless, show some arousal to the rape depictions. Barbaree et al.'s interpretation of the results was that the presence of force and violence fails to inhibit arousal in rapists whereas it does in non- rapists. Barbaree et al draw attention to a possible determinant of the failure of rapists to be inhibited by the presence of force. Rapists may have been desensitized to the use of force by their experience of non-sexual violence in prison or in criminal subcultures. The implication of this suggestion is that control groups should be drawn from non-sexual offenders in similar institutions and settings. Such factors were controlled in a study by Quinsey et al. (1981) which confirmed the finding the Abel's rape index measure distinguished rapists from non-rapists. The finding, in this latter study, that the controls responded to deviant stimuli if informed that this was 'normal' should alter clinicians to the possibility that the setting and subjective meaning of the test for the person may have powerful effects on arousal measures. The fact that sexual offenders and normal control groups are often being assessed in a setting that has very different meanings for each group makes any observed difference

between the groups difficult to interpret. Forensic institutional settings likely to be familiar and to have connotations of punishment for a previous offence for sexual offenders, while the same environments are viewed, perhaps, as strange repositories for the criminally and sexually deviant by 'normal' volunteer subjects. How such differing perceptions might affect sexual responses is largely unknown, but it is clear that a clinical psychologist would need to consider the possibility that differences found between offenders and comparison group are artifactual.

A note of caution about assuming that rapists are distinctive in responding sexually to rape depictions is introduced by a series of experiments by Malamuth and colleagues in Canada (Malamuth et al., 1980; Malamuth and Check, 1980; Malamuth, 1981; Malamuth and Donnerstein, 1982). As Malamuth points out, the suggestion that normal males do not respond to representations of coerced sexual behavior is at variance with observations by other researchers (Schmidt, 1975) and with the high incidence of aggressive themes in widely read popular erotica (Malamuth and Spinner, 1980). Erotic magazines with aggressive themes are unlikely to be bought on a large scale if such themes are not reinforcing for substantial numbers of males in the general population. The inconsistency between these observations and those of Abel et al. (1977) may be accounted for by a variety of factors. Malamuth and Donnerstein (1982) suggest two important qualifications to the general statement that normal males do not respond in the same way as rapists do to rape depictions. Firstly, males from the general population will show high arousal to rape stimuli when certain conditions are met regarding the description of the victim. In particular, arousal is high when the victim is portrayed as becoming involuntarily sexually aroused by the rape. In these conditions many "normal" males respond as highly, and sometimes more highly, than they do in reaction to consenting depictions. When the victim persists in a negative affective response, arousal is less. Secondly, reliable individual differences exist among general population males. Some males are highly aroused by rape stimuli and others are not. Significant differences may exist between responders and non-responders on other measures. In particular, sexual responding has some relationship to self-reported "rape proclivity" (Malamuth, 1981; Malamuth and Donnerstein, 1982). Rape proclivity is assessed in terms of a high self-rated likelihood of raping "if you could be assured of not being caught and punished." About 35% of males report some likelihood on this measure (Malamuth, 1981). Malamuth and Donnerstein report that the "arousal reactions of the High LR (likelihood of raping) subjects..... parallel very closely the responses of the rapists studied by Abel et al. 1971)."

The discussion of sexual arousal patterns so far has assumed that the person's sexual responses form a structure that is fixed over time and across situations. It is possible that the pattern of arousal, like other personality traits, is influenced by situational

factors. Particular life events and experiences may heighten or diminish deviant arousal. One such situational factor is the ingestion of alcohol. A large number of investigators have suggested a link between alcohol ingestion and aggressive sexual offences. Gebhard and his colleagues (Gebhard et al., 1965), in their massive study of sexual offenders, reported that many had consumed alcohol at the time of the offence. These authors concluded that the commission of sexual crimes requires "the suspension or distortion of rationality" and the "in this case alcohol fulfills the requirement." Rada (1976, 1978) found a high incidence of drinking in sexual offenders both against children and adults. A number of points need to be made about such studies. Firstly, there are considerable methodological problems in establishing a link between the two variables (Evans, 1982). Most studies are based on self-report rather than on direct measurement of blood alcohol levels. It may be that offenders are giving what sociologists have called "motivational accounts" of the incident, and that situational variables such as alcohol provide a more acceptable "vocabulary of motives" than do intra-personal factors (McCaghy, 1968; Taylor, 1972). Secondly, the correlation of alcohol use and sexual aggression is unlikely to be a simple causal one. Deviant sexual propensities may cause a high level of drinking or both forms of behavior may be the product of some third variable. Finally, even if there were a causal link, it is not clear how the relationship is mediated. A number of forms of mediation are possible. One plausible interpretation is that the social role of being a heavy drinker involves a social deterioration which decreases the capacity to engage in normal non-aggressive sexual relationships (Rada, 1976). A second common hypothesis is that alcohol disinhibits the offender and releases behaviors that would normally be restrained. Those who suggest disinhibition effects often fail to make it clear whether it is sexual arousal that is disinhibited or actual behavior itself. Experimental work has thrown some light on the effects of alcohol on sexual arousal (Briddell et al., 1978; Lansky and Wilson, 1981). Alcohol can often be shown to increase sexual arousal to erotic stimuli. However, this effect is mediated cognitively rather than physiologically - that is, it is the belief that you have ingested alcohol that increases arousal rather than the alcohol itself. Briddell et al. (1978) showed that subjects who believed (falsely) that they had consumed alcohol showed greater penile tumescence to erotic stimuli than subjects who believed they had had a non-alcoholic drink. More importantly, arousal to deviant sexual stimuli (rape) was more affected than arousal to normal heterosexual stimuli. In this study, subjects who believed they had drunk an alcoholic beverage showed as high arousal to rape as to normal consenting intercourse, whereas those who believed themselves to be sober responded more to normal stimuli. Such cognitive effects are likely to require complex explanations (Lansky and Wilson, 1981). In everyday life, of course, actual alcohol ingestion and belief can rarely be disentangled, and both may simultaneously affect sexual behavior.

The conclusion I would draw from the work on sexual arousal is that, undoubtedly, the advent of sophisticated techniques for assessing sexual responses has produced a significant advance in our knowledge, but the the complexity and ambiguity of the relationship between deviant arousal and deviant behavior should be appreciated. Rapists may be discriminable from non-rapists in terms of rape indices, but many apparently normal males may show significant arousal to deviant material. It is possible that the deviant pattern found by Abel et al. (1977) in rapists is neither a necessary nor a sufficient condition for aggressive sexual behavior to occur. The presence of deviant arousal patterns in the general population has important implications. The exact implications, however, depend on how this fact is interpreted. Are non-convicted males who show deviant arousal simply "successful" rapists who fail to be apprehended? Or do they fail to act out their deviant interests by controlling their rape proclivity? If the latter is the case, there are clear implications for therapeutic intervention. Attention would need to be direct towards determining how it is that these males inhibit their sexual behavior, and to using such methods to teach convicted rapists self-control procedures. Fear of aversive consequences, empathic concern for potential victims and cognitions and attitudes which inhibit sexual aggression are all plausible, though largely unresearched, controlling influences. In any event, an exclusive focus on problems of arousal alone in therapy is likely to be inappropriate as is an over-enthusiastic use of arousal measures to predict future "dangerousness".

AGGRESSIVE MOTIVATION

So far in this discussion, I have stressed sexual aspects of coercive sexual behavior. An alternative, or better, complementary viewpoint is to construe acts such as rape as acts of aggression with significant functional similarities to other non-sexual forms of violent behavior. The woman's movement, in particular, has stressed the aggressive/dominance aspects of rape (Brownmiller, 1975; Russell, 1975, 1982). There is now research evidence and much informal observation to suggest that too much emphasis has been placed on sexual needs as being the most salient aspect for rapists. Studies have reliably revealed that a substantial sub-group of rapists are generally violence-prone, with histories of non-sexual violent crime. Two British studies (Soothill et al., 1976; Gibbens et al., 1977) identified "aggressive" rapists of this sort. Gebhard et al. (1965) similarly classified between a quarter and one third of offenders against adults as "assaultive". Less formal accounts by victims often stress the perceived aggressive aim of the assailant (Toner, 1982), and a report from the London Rape Counselling Center suggests: "our experience has shown us that rape is not "merely" forced intercourse but is an act of violence which uses intercourse as a way of inflicting pain..... its main aim being to humiliate and degrade the victim"

(Roberts, 1976). This latter assertion is confirmed by Wright's finding (1980) that 80% of a sample of English rapes involved physical violence and that 30% of victims sustained significant physical injury. The theme of aggression is again dominant in accounts of rape in war. Brownmiller's historical analysis of rape in war suggests that, to the raper and the raped, it has connotations of far more than sex. The context of such incidents suggests that it is the act of a conqueror. As defence of woman has been the hallmark of masculine pride, Brownmiller suggests that rape by a conquering soldier is meant to destroy all remaining illusions of power for the defeated side.

Psychological theories of non-sexual aggression often distinguish two classes of aggressive behavior. Aggression may be "instrumental" (to obtain some environmental reinforcer) or emotionally mediated ("angry" aggression). A distinction of this sort is made by Bandura (1973) and is implicit in Zillmann's discussion of "incentive motivated" and "annoyance motivated" aggression (Zillmann, 1979). The question arises whether violence in the context of rape is instrumental or angry. If sexual violence is sometimes anger motivated, we would expect that that it would show three features: the precipitating events would be the aversive kinds of life experiences that induce angry aggression (Berkowitz, 1982), the mediating emotion would be a negative state of arousal, probably labelled as anger (Bandura, 1973), and the reinforcer would be the infliction of pain rather than obtaining sexual release.

The best source of evidence that some rapists (though not all) show the above features is the substantial study of Groth (1979) which is based mainly, though not exclusively, on clinical observation rather than on objective psychometric or behavioral analysis. Groth estimated that 40% of his sample of 500 rapists were "anger" rapists, and it is striking that this group show precisely the characteristics suggested above. The precipitating events were typically arguments, domestic problems, suspicions of infidelity, social rejections and environmental frustrations. Common mediating emotions were a sense of anger and rage, associated with feelings of being wronged, hurt, put down and unjustly treated. The fact that much more violence was present in these rapes than was required to produce compliance, also suggest that the reinforcer was the infliction of pain and humiliation. Verbal abuse, swearing and degrading acts were common in the offence situation. Groth's analysis of this group is very similar to a previous description of rape with an "aggressive aim" by Cohen et al. (1971) and has some correspondence with West et al.'s account (1978) of a group of rapists in therapy.

Clinical studies, such as Groth's are, of course, highly dependent on the rapist's self-report, often some time after the offence occurred. It may be that emotional problems and environmental frustrations provide a more acceptable vocabulary of motives than does a

sexual proclivity for sexual violence. It is also the case that the aggressive components of rape stressed by Groth are likely to be more difficult to assess objectively in a laboratory setting than the sexual responses described in the previous section. Marque's study (1981) of both aggressive and sexual components of rape in a laboratory is unusual and to be commended for the comprehensivenes of the measures used. Howells and Steadman-Allen (1978) used repertory grid technique to assess rapists' evaluations of the aggressive and sexual aspects of their offence and found evidence that both components are important. The development of objective measures in this area of aggression is an important task for future research.

The conclusion that both sexual and aggressive motivation are involved in sexual violence raises the intriguing question of how they might interact. In particular, how is it that anger arousal sometimes induces sexual rather than non-sexual violence? Why do some of Groth's angry rapists rape rather than simply assault their victims? There are a number of possible explanations. It may be that anger arousal, in some circumstances, facilitates sexual arousal and vice versa. In experimental work both mutual facilitation and mutual inhibition effects have been found for sex aggression (Malamuth, 1977). Zillmann (1971, 1979) has produced some evidence for residual excitation effects from one emotional state to another. Another possibility is that specific developmental experience may have conditioned sexual arousal to aggressive stimuli for some individuals. Alternatively, rape may be a more effective response than a non-sexual attack, from the rapist's viewpoint. Groth subscribes to the idea that rape is simply the worst thing that the person can do and is thereby preferable in a state of intense anger (Groth, 1979). It may be that anticipated social evaluations of the act determine its nature. Sexual violence is perhaps, less incompatible with the perceived masculine role than a non-sexual assault. It is to this topic of the social evaluation of sexual that we now turn.

COGNITIVE/ATTITUDINAL ASPECTS

Whereas most of the work reviewed so far has been done within the "clinical" tradition in psychology, recent years have also witnessed an increasing social psychological contribution. The concern here has been with cognitive evaluations and images of coercive sex. There are many good reasons for investigating these variables. How rape is perceived and evaluated, for example, it's likely to affect the reporting of offences, how the police and legal systems process rape cases, jury decision-making, sentencing and a range of extra-legal social reactions to victims and rapists. In addition, it needs to be established whether prevailing cultural attitudes are of the sort that might encourage , or alternatively discourage sexual aggression. Studies in this field fall into two broad categories: experiments and correlational analyses. (For detailed references see

Howells et al., 1983). In the former category. subjects are typically presented with an account of a rape and are subsequently asked to make judgements about it. The account may be in the form of a simulated newspaper article, a video-taped interview, a medical file or transcripts of court proceedings. The independent variables may be manipulations of the nature of the offence, the characteristics of the offender or victim, or some attribute of the person doing the experiment. The dependent measures are typically the subjects' ratings of the offender's culpability, of the role of the victim and so on. In correlational surveys, questionnaire measures of attitudes to rape are administered to large groups of subjects, and an attempt is made to assess the degree of association between rape attitudes and sociodemographic or personal characteristics of the subjects. Such studies reveal a number of important facts (Howells et al., 1983). Rape attitudes are complex and multidimensional (Feild, 1978; Field and Bienen, 1980) and are socially segmented, with differing attitudes in various social groups. In particular, males reliably differ from females in their rape attitudes (Calhoun et al., 1976; Cann et al., 1979; Howells, et al., 1983; Field, 1978).

A number of other findings are relevant to the aetiology of rape and to clinical interventions. Firstly, a substantial proportion of people appear to subscribe to beliefs about rape which might serve to justify or disinhibit sexual aggression (Field, 1978; Burt, 1980). Burt reports that more than half of an American sample, for example, agree with the statements that "a woman who goes to the home or apartment of a man on the first date implies she is willing to have sex" and "50% or more of reported rape are reported as rape only because the woman was trying to get back at a man she was angry with or was try-ing to cover up an illegitimate pregnancy." It is the prevalence of such attitudes that leads Russell (1982) to label the United States a "rape-supportive culture." Secondly, the tendency of subjects to subscribe to these "rape myths" does not occur in isolation but forms part of a more general cognitive/attitudinal structure. This finding is consistent with feminist analyses (Brownmiller, 1975) and with the anthropological analysis of Sanday (1981). Burt (1980) found that acceptance of rape myths can be predicted from the degree of sex-role stereotyping, the extent to which sexual relationships are seen in adversarial terms, and general acceptance of interpersonal violence. The finding for sex-role stereotyping has been confirmed in a number of other studies (Klemmack and Klemmack, 1976; Field, 1973; Krulewitz and Payne, 1978; Field and Bienen, 1980; Tieger, 1981; Schwarz and Brand, 1983). Given that these studies were all conducted in North America, it is important to know whether these effects are culture-specific. In a recent small British sample (Howells et al.,1983) we found that males who were stereotyped about the female role were less aware of damage to rape victims and were more likely to blame victims for the assault, confirming American findings.

A crucial question is whether rapists themselves occupy an extreme point on the continuum of rape-promoting attitudes that exists amongst makes in society. If such attitudes do indeed cause sexual aggression, we would expect rapists to be more sex-role stereotyped, adversarial and violence accepting than non-rapists. As yet, few studies have been addressed to this issue. Tieger (1981) and Malamuth (1981) have presented some evidence that males with a high rape proclivity are more sex-role stereotyped, and Check and Malamuth (1983) report that sex-stereotyped men show more arousal to aggressive pornography. Clearly, comparisons on behavioral rape measures are essential.

IMPLICATIONS FOR ASSESSMENT AND TREATMENT

The preceding discussion should make it clear that any particular sexually violent act requires a comprehensive and multi-faceted analysis. The details of such an analysis follow logically from what has been established by the studies. Such an analysis would need to include the individual's pattern of sexual arousal and factors tending to disinhibit restraint of deviant arousal (low self-control, alcohol use, poor anticipation of consequences). In addition, the relationship between the coercive behavior and internal states of anger and internal frustrations and stresses would need to be determined. Finally, cognitive beliefs and judgements about women, sexual relationships and sexually appropriate behavior would require exploration. Even such an apparently broad analysis is not exhaustive. The sub-group of sexual aggressors who have instrumental problems (poor social skills, deficient sexual information) has not been discussed, though they may be frequent in psychiatric settings (Howells, 1976; Howells and Wright, 1978; Crawford and Allen, 1979; Crawford and Howells. 1982). It is clear that, given the multiplicity of contributing factors, two individual sexual aggressors could engage in behavior that is topographically similar (i.e. rape) but functionally very different. The likely heterogeneity of populations of rapists is evident from the above discussion.

As with other psychological problems, a full analysis of the development of the behavior indicates the essential features of an ensuing therapeutic program. Comprehensive interventions, including sexual, aggressive and attitudinal components are, in fact, increasingly advocated for sexual aggressives and related forms of sexual deviance (Abel et al., 1978; Crawford, 1979, 1981; Perkins, 1982, 1983a, 1983b). The work discussed on deviant arousal in "normal" males would suggest, perhaps, that programs should place greater emphasis on the <u>control</u> of deviant arousal rather than on its elimination. In addition, the fact that some assaults are aggressively motivated (as outlined above) suggests that treatments appropriate for non-sexual aggression are also appropriate for sexual aggression. That reconceptualizing rape as an aggressive act can expand the range

of therapeutic methods available can be illustrated by pointing to the potentially modifiable cognitive, affective and environmental components of angry aggression (Novaco, 1978; Howells, 1981b). Like non-sexual aggressors, sexual aggressors could be helped by reducing the aversiveness of the external environment (solving social difficulties, reducing the likelihood of failure experiences etc) and by learning self-control strategies for managing anger (Novaco, 1978). The major difficulties in implementing any treatment program for sexual aggressors should not be underestimated (West, 1980). Such difficulties are however a product of institutional and economic restrictions rather than a lack of theoretical knowledge or therapeutic skills. Finally, it must be acknowledged that psychological treatment of the individual is likely to be of much less significance than attempts to change the powerful social and cultural forces that maintain sexually violent behavior (Sanday, 1981).

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PATTERNS OF AGGRESSION - NOT UNNATURALLY

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INTRODUCTION

I would like to present, in the first part of this paper, a brief summary of the theoretical perspectives and methodological orientations which I and my colleagues have drawn upon over the last 10 years. Such an introduction, I feel, might be useful because the 'style' of this research is probably a little different from that of many more clinically or experimentally oriented psychologists.

Having done this, I will offer as a case-example the research which focused on the allegedly demonic activities of British football fans. This research was largely qualitative, so I will also include some preliminary findings from empirical work currently in progress which seeks to isolate, more precisely, the rule-frameworks which govern or direct the expression of aggression amongst both males and females. Finally, I will make some rather speculative analogies between what I will argue is rule-governed or even ritualized aggressive behavior within human subcultural groups on the one hand, and that which is observed in both so-called primitive tribespeople and other species of animals including non-human primates. I will also allude briefly to some cross-cultural and historical comparisons.

My purpose in the latter part will primarily be to indicate how different levels of explanation may be 'nested' to produce a far more satisfactory perspective on aggression than is currently available among the sharply divided disciplines which claim an interest in this important subject area.

First then, to the general framework within which I started out to explore aspects of behavior which give rise to an immense amount of moral indignation - to what Cohen has aptly described as moral panics. It was in the early work of Rom Harreé that I found not so much a coherent theoretical and methodological framework but the confidence to embark on a Doctorate in a department of Experimental Psychology with an outline which included not a single experiment - nor even any significant concern for numerical data. Harré, of course, upset a number of psychologists not by his originality (for sociologists had made many of his points decades before) but by crystallizing the discontent felt by British psychologists in the late 1960s and early 1970s. Experiments which involved children hitting Bobo dolls, or having guns lying around a laboratory, seemed to us unlikely to aid understanding of aggression in the world outside of these bizarre settings. The phenomenologically oriented approach seemed more appropriate to investigating, as a social scientist, the passionate and aggressive world of soccer fans. Harré insisted that actions need to be explained firstly in the actors' own terms. The assumption of what is known, rather grandly, as ethogenic social psychology, is that ordinary folk are rational beings capable of articulating the reasons that underlie their actions - just like psychologists. Within the reasons and justifications offered by informants was to be found explanation. And a principal method of accessing such rationality was through the systematic collection of accounts. A second assumption was that patterns of action were orderly. They were not chaotic, random or gratuitous, but could be understood by reference to social-rule frameworks. To understand aggressive behavior within coherent groups one needed to identify the common moral imperatives and prescriptions which are inherent in any sustained social group and which maintain its existence. Groups of football fans have both coherence and longevity and are, in turn, embedded in a very identifiable sub-culture.

Such assumptions are, of course, testable. If certain observed patterns of behavior are truly random, purely emotive or derive from uncontrollable drives, then the ethogenic approach will fail. There will be no consistency in accounts - no possibility of isolating rule frameworks either qualitatively or quantitatively. One would not consider, for example, applying such an approach to the behavior of psychotic individuals or to the frenzied outbursts which characterize some features of violence within families. The ethogenic approach, like all others, has it limits. The "let's ask them" approach has further obvious methodologic limits. It is one thing to pose questions - to ask fans to account for action. It is another to make sense of the statements they provide. Here one needs to call upon other methods, such as careful observations, and upon other types of theory (particularly sociological theory) to render opaque rhetorics more intelligible. But I will deal with this issue shortly.

Another point to stress here is that I see a phenomenologically oriented approach as being not so much a complete one in itself, but rather as a way of opening up a path to other, more rigorous, methodologies. If we wish to study patterns of group aggression, in any context, we need to know what is going on in terms employed by those in the action. Then we can apply our scientific strategies, but not before. My criticism of a lot of psychological work which involves experimentation and test or questionnaire administration is that it is often premature. Often the wrong kinds of question are asked, or they are couched in the wrong terms, or operationalizations are established which bear only tangential relevance to the people whose real life behavior we are trying to explain.

Some people here may remember a British pop/folk group of the 1960s called the Incredible String Band. A refrain in one of their songs sums my point quite precisely. In the Hedgehog Song, the hedgehog sings:

> "You know all the words and you sing all the notes but you never quite learned the song I can tell by the sadness in your eyes that you never quite learned the song".

So, for me, the essential requirement for research is that one attempts at least to learn what the song is about - one needs to know what the soccer terrace culture is about. Then we can ask questions relating to cause or to function and develop theories and models to account for it.

Evidence for the orderliness of football fan behavior was evident from video-tape material taken at Oxford United's ground prior to the more intensive research. Recurring sequences could be noted even on casual inspection and stable sub-groupings on the terraces could be identified. Viewing tapes of aggressive incidents in slow-motion also revealed the existence of internal constraints on violent behavior. Despite apparent mayhem and riot on some occasions, actual physical contact between members of rival groups was rare and the levels of real injury were extremely low. Gestures, shouted obscenities, hostile postures and running around, however, were very common indeed. This evidence was in direct conflict with the received opinion at the time - the one which insisted that blood and destruction were everyday events at soccer grounds.

I don't wish to deal here with an account of why a society should need to cast specific groups as demons in this way. The development of this 'outsiders' perspective, aided strongly by the media, has been dealt with in some detail by sociologists such as Cohen and Young and others in the tradition of Becker. My concern has been more with the 'insiders' perspective and how this can lead to a more rational explanation of aggressive behavior.

Collection of accounts from central members of the soccer terrace culture quickly provided strong evidence for the existence of tacitly held social rules which guided and constrained aggressive and violent activity. I do not have time here to do full justice to the body of evidence collected but I can offer some examples of accounts to illustrate the point. (The material is discussed more fully in a number of books and articles which are listed in the bibliography.)

Let me first, however, explain what I mean by rules. Firstly, I am concerned with rules of interpretation - how shall things be called? - how shall situations and events be rendered meaningful? Discovery of these interpretative rules is an essential precursor to any explanation. The outsider cannot rely on their own implicit assumptions of meaning. For example, we might all assume we know what a "fight" is. We might say that it involves physical contact and attempts to injure a rival. And yet, working with football fans and members of other youth subcultures, it became clear that they used the term to refer to vents in which there was no physical contact, no blows, punches or kicks - only gestures, verbal insults and stylised taunts.

The second type of rule to be considered is the prescription for action. Having attached meaning to an event or situation, using interpretative rules what should one do? The word "should" is important here, for prescriptive rules are moral imperatives, rather than mere reflections of behavioral regularities. The existence of such rules is quite apparent in the everyday talk of fans. Consider, for example, this brief extract from an account offered by a fan of the Chesterfield team:

> 'There's an organized pattern of events, you know what's going to happen. Bringing a knife, probably by your own supporters sometimes it's looked down on as being a form of, cowardice. There's not many people will carry knives about, there's not many who set out to harm someone. Not many people have got that killer instinct. It's not very often it goes onto a point where he's kicked senseless'.

In parallel with these explicit appreciations of social rules and propriety were frequent references to the primary attraction of the soccer terrace culture. This aspect was summed up particularly well by a supporter of Southampton:

> 'It's like an outing, the feeling of actually being on the terraces with a lot of people with a common aim in their minds, apart from violence, to help the team to win, to see the goals go in and to see a good game. At away games then it's a feeling of actually being somewhere new, of sharing and looking at the other team's ground. And one of the most enjoyable parts, more than anything, is the actual

> travelling, going there on a coach with 40 or 50 other friends, sort of having a drink, having a sing-song, coming home. And I think the most exciting part is the real bid F.A. Cup games or a large draw when it's so important to you that people actually come out with ideas like big red and white top hats or big flags or banners with certain slogans written on them to provide fun. I don't think in my experience there's much to compare with the atmosphere of being in a large group, all singing and chanting to support your team'.

Virtually all fans were conscious of the gulf between their insider's perspective and the dominant ideology current in the media. The next example here comes form a Chesterfield fan aged 18:

> 'Travelling around the country you find that perhaps the situation is not as serious as what it's been made out to be: probably in most papers they do give a false impression of what's actually happening. In Chesterfield on Saturday.... today's paper, the Daily Telegraph, shows some quite horrific scenes of people and it tells you they've broken legs and such things whereas in fact I don't think there could have been more than three or four arrests through the whole game'.

Among older fans in particular (16-19 years) the awareness that aggressive actions were largely symbolic was frequently revealed, e.g.:

> 'They've got their area to stay in, if they come in our area then they've got to be moved. They've got to get back to their own side. But you get a lot of these kids saying "Oh, we're going up there.... you know, we'll to up there and have a good scrap". They're hoping that they'll just go up there and chase the other supporters round the ground and not get into any scraps, you know. They've already proved themselves superior without kind of sticking the boot in or sticking a fist in or anything like that'.

The maintenance of this rule framework is achieved within the terrace culture by the existence of a highly distinctive heirarchical organization within which particular sub-groupings and role positions can be identified. Progress through this social world can be viewed in terms of moral careers (a term borrowed from Goffman). Fans enter the terrace culture at the age of 10 or 11 as 'Novices!. Through the acquisition of social knowledge, appropriate styles of dress and stylised behavior they progress into the main body of the fans which occupy the ends of stadia. Such progress involves a change in physical position on the terraces and, more importantly, the opportunity to engage more centrally in the chanting, singing and aggressive

displays. Status-laden roles may be sought after and particular identities achieved.

The main body of fans is usually referred to by the press or T.V. in terms such as hooligans, thugs - even mindless savages. Being less emotive, we have labelled them the 'Rowdies', a term which more accurately describes their routine behavior.

The average age of Rowdies is 16-17, but a further step remains open in this moral career structure. Having established a reputation within the Rowdies group and after winning admiration and status, a fan might graduate. At this stage he is able to abandon most of the symbolic forms of dress - the large boots, scarves, emblems etc. and engage less in the energetic taunting and derision of the rival fans. He no longer has to prove his commitment, his loyalty and his manliness. So he moves to one side of the terrace knowing that his reputation is secure.

It is within this career structure that rules and conventions are negotiated and transmitted. Individuals who breach the rules will be the subject of social censure and will fail to establish significant reputations or achieve influence.

So far, I have made everything sound fairly simple - a strong social order in which fans are aware of the rules and take steps to see they are followed. But there is a problem, one which is highlighted in many of the accounts that fans offer. For, in addition to providing evidence for a rule framework, fans also offer a perspective which is remarkable similar to that of the outsider. On the one hand, behavior is constrained, orderly and safe. On the other, it is bloody, dangerous and violent. It is this inconsistency in accounts which poses a problem for Harré's methodology and gives rise to a great deal of misunderstanding among social researchers. Consider this particularly enigmatic exchange between myself and two fans:

Questioner:	What do you mean when you put the boot in?
A:	You kick's them in the 'ead don't you?... strong boots with metal toecaps on and that
Questioner:	And what happens then?
A:	(Quizzical look)
Questioner:	Well, what happens to the guy you've kicked?
A:	He's dead
B:	Nah! - he's alright, usually anyway

Quite clearly, the fan who has been kicked in the head with a steel-capped boot is not going to be "alright". Neither is he likely to be dead. Without some way of interpreting these answers the transcript is of no value at all. Indeed, faced with material like this one might be forgiven for returning to the tangible security of apparently more orthodox "scientific" methods in social psychology. However,

even answers such as these can be made intelligible in the actor's own terms once one has built up a picture of what the terms of reference are, what motivations the individual has for offering a particular kind of account, and what function particular kinds of rhetoric play within a given subculture.

The functions of exaggerated rhetorics becomes clear when we consider the basic attraction of the terrace culture itself. Fans, by and large, come from particular sections of our society. For them schools are not places where their achievements are recognized. Jobs, if they are employed, are usually poorly paid and unlikely to lead to higher things. And so, alternative worlds are sought where the opportunity of being recognized, of establishing reputation and a sense of personal worth, become real possibilities. Being manly, being tough, being courageous - these are the recipes for achievement in this much more exciting culture. To preserve such a useful environment, and to render it stable, social rules are negotiated to limit the levels of violence. The behaviors required in the demonstration of courage become ritualized. Symbolic actions replace those which are potentially injurious. At this point the problem arises. A fan cannot walk into his local pub and announce to his peers that he has just engaged in a highly orchestrated exchange of symbolic actions with a fan of a rival team. Instead he will say "Did you see the way I beat him up - kicked him senseless". A sense of danger and excitement must be reintroduced, through rhetoric, in order to maintain a contrast between the terrace culture and the dull weekday world. Having introduced such distortion, other fans must conspire to accept it and subsequently endow the speaker with tokens of approval.

Of course, if you simply pay attention to the exaggerated rhetoric, without understanding its social function, you will obtain a fundamentally incorrect picture of aggressive behavior not only within settings such as football grounds but also among young people generally. William Belson, in his work on adolescents and T. V. violence, falls into this trap. One very surprising by-product of the data, for example, was that one in eight of the sample of school boys apparently engaged in acts of serious violence on a regular basis. These boys gave positive responses to items such as: "I deliberately hit a boy in the face with a broken bottle"; "I tried to force a girl to have sexual intercourse with me"; "I half strangled a cat with my hands", etc. In fact, according to the data presented, one is expected to believe that this 12% committed such acts between 10 and 500 times during the last six months.

These figures are quite astonishing and bear little resemblance to information collected by other research teams in the field. The main reason for the discrepancy would seem to lie in the very naive way in which Belson collected his material. If you simply ask boys whether they have done violent things recently you usually succeed in

tapping only a very conventionalised rhetoric. Often boys admit to a range of acts which, with more intensive and detailed work, are often shown to be rather different in nature from their initial descriptions. Many young lads, for example, talk of giving people a 'good hammering' or 'smashing them up'. In reality, however, 'hammering' and 'smashing' often turn out to be quite controlled social encounters in which little physical harm is inflicted. The 'violence' lies more in the talk than in the behavior.

The exaggeration process, which is very marked in the accounts of football fans, is itself, rule-governed. Whilst fans will conspire to accept certain types of distortion, they will refuse to tolerate what, for scientific purposes, we will describe as bullshit. The next extract illustrates the internal reaction to over-exaggeration very well. It comes from discussions with Millwall fans on their way to a match in Southampton. The extract also contains, I think, a very good picture of what the terrace culture is really all about:

> 'Fan A: It's the name and the reputation. You go somewhere like today, we'll go down to Southampton, they'll say "Millwall, ah," and they'll turn out in force, "let's have a go at Millwall, we know they're going to bring some supporters". If the other team, the home team, knows the away team's going to bring supporters they'll come out for a fight, half of them. It's a shooting match....it starts off with, but .....you know, it gets kind of emotional don't it..... Really good Millwall supporters, right, they can't stand their club being slagged down you know, and it all wells up, you know, and you just feel like hitting someone.
>
> Q: How many people actually get hurt in those kind of things though?
>
> Fan A: When we played Everton in the F.A. Cup I spent two weeks in hospital, I got seven busted ribs and a broken nose.
>
> Fan B: No, that's exaggerating. The young fellas, you know, they're giving each other verbal and that, you know, and they're running each other down, that's all harmless fun you know, even if they sort of have a little chase and chase one another round the grounds .... But when it comes to people bringing out knives, that's out of order.
>
> Fan A: But it's changed, it's changed, everything comes out now. Alright, fair enough, when we go away, I'll admit it, I do people in the eyes with ammonia, so what? Right? I got done at Everton, and since I've been there I've carried that ammonia with me all the time. There's no way I go away without that ammonia.

Fan C: Where is it now then?

Fan A: Today I haven't got it, right?

Fan C: Aah, I don't believe you, I don't believe you. If you take it everywhere why ain't you got it today?

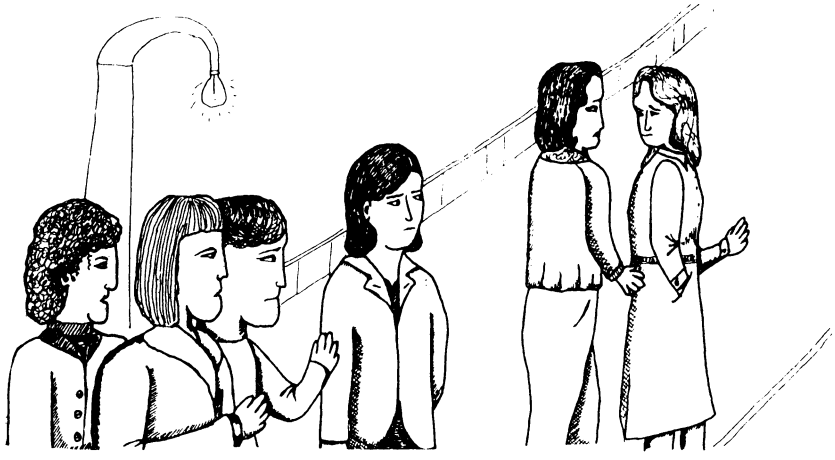
Fan A: 'Cos I haven't been home to get it. Straight, that's the truth.

Fan B: No, you go down this train and ask everybody if they've had ... a fight, you know, a batter with anybody at a football match and they might say we done this and we done that but they never actually done it.. It's always 'we', you know, 'we', it's the group.... Yeah, it's we done this but never actually they done it, the majority done it, you know? 'We', you know what I mean? It's never 'I'.

So far I have been relying on qualitative assessments of account and observation material. No matter how carefully one conducts such research one has to face charges of being 'unscientific', 'biased' and so on. And yet, it seems to me, an involvement with the insider's world is a fundamental prerequisite for understanding patterns of group aggression. What is needed is an integration of qualitiative or participant research with the more rigorous analytical methods which have currency in the discipline of social psychology. In an attempt to meet these needs our more recent research on aggression attempts to develop from a "soft" accounts methodology to a position where empirical instruments can be developed and statistical analyses performed. To illustrate this development I would like to refer briefly to some work which is in progress and to some fairly preliminary results which have been obtained.

This research focuses particularly on sex and social class differences in the management and expression of aggression - but I don't really want to get too deeply into that rather complex area at this point. We still view the role of account collection as quite crucial. It yields evidence and data in its own right but it provides the basis for developing quantitative instruments which have salience and relevance to the respondents themselves. For 3 years we have been working with both boys and girls in schools, eliciting from them examples of the conflict situations in which they find themselves, accounts of behavior within such situations and the concepts employed to understand and explain events. Our tape recordings are transcribed directly into computer files and systematically coded throughout for content and context. This allows us to scan a very large body of material and to pull out recurring types of event and behavior. On the basis of this procedure, we develop what we call Conflict Event Matrices. These consist of a set of situations familiar to respondents, and in this case they are shown in cartoon form.

Jane and Mary are at a disco. After having a good time they leave but are followed down the street by a group of 4 girls who had also been at the disco.



The 4 girls accuse Jane and Mary of being slags and of chatting up their boyfriends.

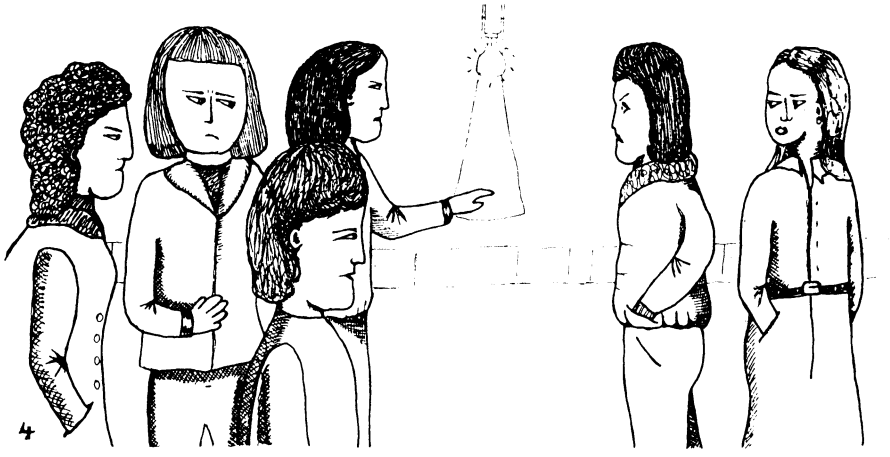
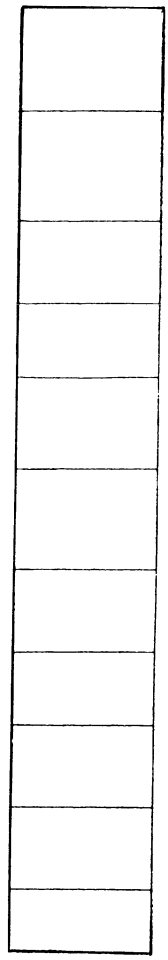


Fig. 1

Also derived from the accounts material are recurring categories of behavior which have applicability across situations. The details of the behavior change from event to event, but here a set of 10 types is common to all. Each respondent is asked to rate the appropriateness of each behavior within the situation portrayed. The use of the word appropriate here is important since we use the method in an attempt to identify rule-dimensions which underlie social action. rules, as I have mentioned earlier, imply ought and should, and



Mary and Jane shout insults at the four girls.

Mary and Jane apologize for their behaviour.

Mary and Jane start hitting the girls.

Mary and Jane produce weapons.

Mary and Jane call for help from some of their friends.

Mary and Jane start pushing the girls.

Mary and Jane run off to call the police.

Mary and Jane run off down the road.

Mary and Jane start pulling their hair and scratching them.

Mary and Jane deny chatting up the girls' boyfriends.

Mary and Jane threaten to beat up the four girls.

What else do you think would happen?

.....

.....

.....

Fig. 2

therefore govern propriety. The assumption is that the conceptual schemas which derive from analysis of these matrices correspond with tacitly held social-rule frameworks.

To analyse the matrices we employ fairly straight-forward Multi-Dimensional Scaling techniques - the Indscal program in particular. Figures 3 and 4 give some examples of the dimensions which result. Figures 3 and 4 show 3-dimensional solutions for data derived from male and female subjects respectively. The first dimension in each

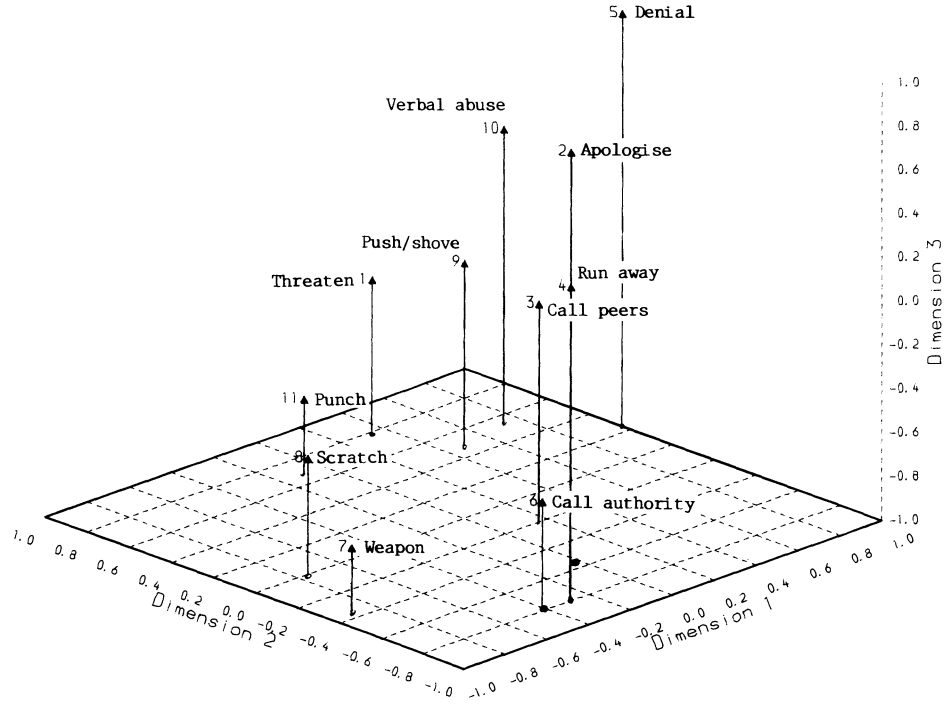


Fig. 3. Results of MDS of data from male subjects.

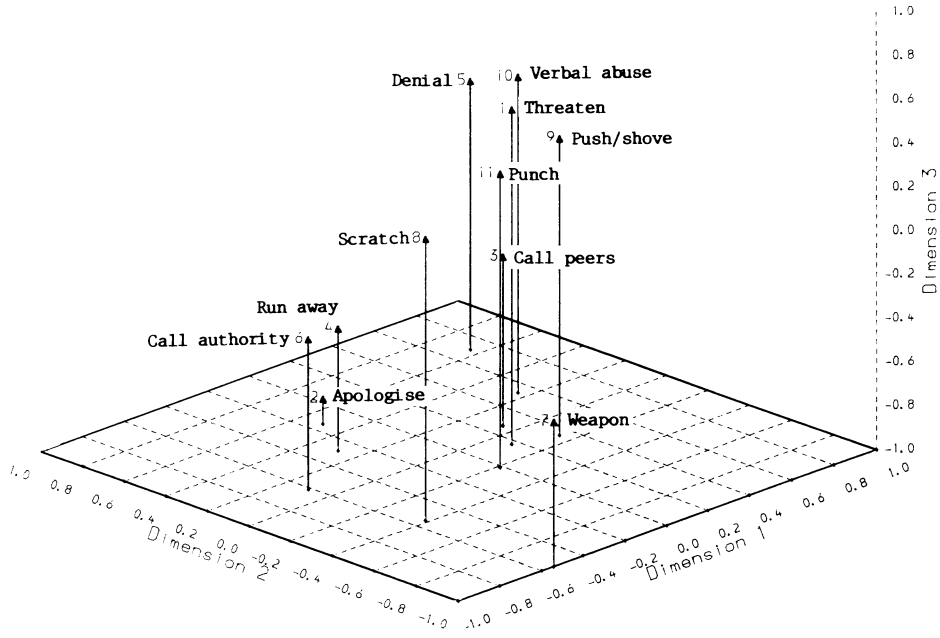


Fig. 4. Results of MDS of data from female subjects.

case is isomorphic with what we have previously found to be a general rule framework. Toward the negative pole lie routinely proscribed acts such as using a weapon, calling authority and running away. Toward the positive pole are the items relating to prescribed behavior such as threatening, using verbal abuse and denying that any offence has taken place. Note that these dimensions are not all like simple violent - non-violent continua, which one might expect in the absence of extant rule frameworks.

As with any research which relies on MDS or factor-analytic methods, there arises the criticism that the final results are wholly a product of the items one chose to start with. This is inescapable. In this case, however, the input, as it were, is derived not on the basis of intuition but on the regularities evident in the account material. Here the analysis serves to 'translate' the material and to uncover its underlying diemnsionality. And, as we have seen, the dimensions actually look like the rules which are evident to anybody who spends time within such groups of young people.

A Quick Recap at this Stage

I have tried to argue that certain patterns of collective aggression are constrained by social rules resulting in the form of ritualisation. Such patterns of behavior cannot be understood without reference to the conceptual schemas and systems of values held by members of such groups and sub-cultures. The net effect of the ritualisation is a level of physical violence much lower than one would expect in such aggressively charged situations. In the case of football fans, evidence of injuries obtained from football clubs and from first aid posts supports this view. One sees aggression, but violence itself it surprisingly rare - one has, instead, an illusion of violence.

As a social psychologist, one could legitimately stop at this point. As a micro-social analysis of aggression on the soccer terraces, the study is complete. But I think there are much broader issues to consider here. And these involve the ubiquity and the function of such behavior patterns. Are activities on the soccer terraces unique to such ceremonial arenas, to be explained perhaps in terms of the novel problems of twentieth century capitalist society? Or are they just particularly visible examples of much more universal aggression management processes? It is at this point that we need to look wider afield and to explore other levels of explanation.

Firstly, we might ask, are the rule-governed activities of soccer fans similar in fundamental respects to those observed in other areas of British youth culture? Our more recent research suggests that this is very much the case. Similar conceptual schemata are apparent across a broad spectrum of working class youth (although

we get a rather different picture from our middle class female respondents - but for a variety of reasons).

In addition, less formal work with members of French youth culture groups in Paris, the descendents of the Blouson Noir, suggests similar management strategies here. The notable exception to this pattern is to be found in the youth gangs of America. Our work in Brooklyn, New York with largely black and hispanic members of clearly structured gangs suggests a reversal in the function of social rules. Here the unwritten conventions seem to increase levels of violence rather than constrain them. If you are attacked by a rival with a baseball bat then the appropriate behavior might be to shoot him with a gun. (No sense of fair-play here!) I will argue, however, that we might see the New York gangs as a deviant case arising out of peculiar social and historical conditions. It was Alexis de Toqueville, you may remember, who made an interesting observation of early American frontier violence:

> 'In Europe one hardly ever fights a duel except in order to say that one has done so; the offence is generally a sort of moral stain which one wishes to wash away, and which most often is washed away at little expense. In America one only fights to kill; one fights because one sees no hope of getting one's adversary condemned to death. There are very few duels, but they almost always end fatally.' (The Duel)

The deviance of this extreme pattern of American youth violence becomes even more marked if we look at the historical predecessors of "European" collective aggression. Let me offer just two brief examples. And where better to start than ancient Rome. In the days of the early Roman emperors, from the first century AD onwards, the circus provided the main focus of entertainment. Inside the hippodromes and the stadia, which were often built in the middle of cities and large communities, raced the charioteers, colourful legends in their own times. Chariot racing commanded great skill, courage and fast horses. Like sport today, both the riders and their equipment were big business and because of the circus' great appeal to the populus romanus, a profitable entertainment industry flourished. The Circus Maximus in Rome, for example, was enlarged on the instructions of Nero, to accommodate 200,000 spectators - twice the number Wembley or even the Houston Astradome will hold. With the industry flourished groups of rival spectators who formed the early circus factions. On the race track, charioteers rode in the colours of their particular faction - red, white, blue or green. Of these, the Blues and the Greens had come to dominate the field. In doing so, the rivalry between them became more intense.

In a letter written at the end of the first century AD, Pliny the Younger gives us an intellectual's account of the circus.

His attitude both to the games themselves and to the spectators might sound very familiar:

> 'I have spent the past few days very pleasantly and restfully among my books and papers. You may wonder how that was possible in Rome. Well, the games in the Circus Maximus were on, and I'm not the least bit interested in that kind of show. There's nothing new, no variety, nothing for which one is not enough. This makes me all the more surprised that so many thousands of grown men are prepared to see over and over again in such childish fashion galloping horses and men driving the chariots. If they were attracted by the horses' speed or the drivers' skill, there might be some sense in it. But as it is, they merely support a piece of cloth; that is what they follow, and if two colours were changed over in the middle of the actual race their support and allegiance would change too and they would immediately desert the drivers and horses they recognize from their seats and whose names they shout.
>
> Fancy such influence and power wielded by one worthless shirt, not merely among the common crowd, which is more worthless even than that, but even among some men of taste, When I see this sort of person so insatiably fond of a sport which is so empty, meaningless and repetitive, I must admit to a feeling of pleasure that the pleasure is not for me. So for the past week I have readily spent my idle hours in writing while others have been wasting theirs in the most idle pursuits.' (Letters, book IX, 6)

Pliny sounds very much like some of the pedantic arbiters of taste we find today. Indeed, in his contemptuous dismissal of the mass leisure of his time, he resembles closely a few academics I know who think that football is a game only for those with their brains in their feet. Nonetheless Pliny's account highlights very clearly the passions and factional interests that could be aroused even by 'worthless shirts' of a particular color.

Alan Cameron, Professor of Latin at London University, makes a particularly rational analysis of the true role of the Circus Factions, and draws direct comparisons with contemporary 'hooliganism':

> 'It is clear enough from the evidence...that there <u>is</u> a direct connection between the games and faction misbehavior just as there is between the football stadium and soccer hooliganism today. But in neither case is the violence to be explained <u>solely</u> in terms of the excitement generated by the charioteers or footballers. Other factors are certainly involved. In both cases there is undoubtedly a ritual element... The games can serve as a field where the youth who leads an otherwise ordinary and unexciting life

> can prove himself a man by fighting and destroying....for an hour or two he can be an object of fear to all who cross his path. The problems and anxieties that dog his everyday life will be dissipated in the excitement.'

A further example of a rule-governed expression of aggression in an historical context comes from an account of fighting in London made by the Huguenot refugee Misson de Valbourg in 1685:

> 'If two little boys quarrel in the street, the passengers stop, make a ring around them in a moment, and set them against one another, that they may come to fisticuffs.... during the fight the ring of bystanders encourages the combatants with great delight of heart, and never parts them while they fight according to the rules. And these bystanders are not only other boys, porters, and rabble, but all sorts of men of fashion, some thrusting by the mob that they may see plainly.... The fathers and mothers of the boys let them fight on as well as the rest, and hearten them that gives the ground or has the worst. These combats are less frequent among grown men than children, but they are not rare. If a coachman has a dispute about his fare with the gentleman that has hired him, and the gentleman offers to fight him to decide the quarrel, the coachman consents with all his heart. The gentleman pulls off his sword, lays it in some shop with his cane, gloves and cravat, and boxes in the same manner as I have described above.....I once saw the late Duke of Grafton at fisticuffs in the open street, with such a fellow, whom he lambed most horribly. In France we punish such rascals with our cane, and sometimes with the flat of the sword; but in England this is never practised. They use neither sword nor stick against a man that is unarmed, and if an unfortunate stranger.....should draw his sword upon one who has none, he'd have a hundred people upon him in a moment, that would, perhaps lay him so flat that he would hardly ever get up again until the Resurrection.'

I have provided quite a long extract here because its author provides us with a a very lucid account of plain, simple and straightforward seventeeth-century aggression. he reveals a whole set of social attitudes which recognized the fact that young men would, not infrequently, enter into aggressive disputes with each other. They also reflected a simple, but seemingly effective, rule framework which rendered the whole business manageable and acceptable. So long as men fought fairly and didn't make use of more effective tools at their disposal, social censure was held back. Nobody interfered, the dispute was settled and the antagonists went home with nothing more than a few bruises. Using a weapon against an unarmed man - a very efficient way of dealing with any rival - was

not only frowned upon, it also made the perpetrator liable to even more deadly retribution. The most striking aspect about these fights is that the community in general, from the porter to the man of fashion, was quite prepared to tolerate, even encourage, a kind of violence which today sends people into paroxysms of outrage.

The fact that the pattern of aggression seen in British youth culture has such a clear historical pedigree would rule out explanations couched solely in terms of novel social conditions or forces. This timeless quality of what the British call Aggro also leads us to look for other parallels - in Anthropology and Ethology.

Space is far too limited to make other than very superficial comments here but hopefully the material is familiar to many people. Reading through the anthropological accounts of, say, tribal warfare among the Dani of New Guinea, one sees immediate parallels. The purpose of war is clearly not to kill people. A heavy shower of rain, which threatens to dissolve the carefully applied facial decoration of the warriors, is often sufficient to bring a battle to an early conclusion. As Gardner and Heider note in their splendid book Gardens of War, the casualty rates for centuries of warfare are almost trivial. They are rituals with clear and unequivocal functions. Similar rituals, with similar functions are to be found across the globe and are sufficiently so deeply entrenched within cultures as to endure everything except colonial interference and exploitation.

In animals, of course, the rituals of agonistic behavior have been documented in detail - from lizards and sticklebacks to chimps and other primates. Here again there is no time to do any justice to this rich and interesting field. But perhaps there is no need. The purpose of making these comparisons is simply to draw attention to the function of the patterns of aggressive expression one finds in contemporary British, and possibly European, youth culture.

When I have talked about animal comparisons in the past I have sometimes attracted rebukes for being reductionist or favoring a sociobiological standpoint. But I feel, quite strongly, that one can talk meaningfully about functionally equivalent behaviors without saying anything at all about the causes of the behavior. Roger Masters in his paper in Von Cranach et al., Human Ethology, makes this point quite clearly. He insists that to point to analogies between patterns of human aggression and that seen in animals is not to suggest that there are common causal mechanisms: "Human learning and cultural tradition may often satisfy functions which, in other species, are to a larger degree under genetic control".

Following this we might conclude that the neck biting reflexes of rival lizards; the branch waving and teeth baring of chimps; the chest beating contests of the Eskimo; the practice of 'counting coup'

among North American indians; the chanting and gesturing and posturing of the football fan - are all behaviors which are part of ritualized systems which have the same adaptive function. They enable expressions of aggression in ways which are managed and constrained. This consideration of function - which for social psychologists means a sometimes uncomfortable change in perspective, a shift in the level of analysis - is important for a number of reasons. It allows us, in Master's sense, to identify those patterns of aggressive expression which are "unnatural" i.e. non-adaptive. I raised briefly the example of New York youth gangs. Here we find social rules, structure and ritual in a very strong sense. But the function of this system is different and injurious violence is all too common. The deviance of this example is highlighted by the kinds of comparison to which I have alluded. And in this case, because it is deviant, we need to consider the particular social, cultural, economic and political factors which may have given rise to that pattern of behavior.

The activities of British football fans and members of other youth groups, in contrast, appear to be not unnatural. We can see that it provides individuals with opportunities for achievement of personal and social identity, status and worth - things which are difficult if not impossible to achieve in mainstream society. At the same time, the aggression which is a feature of this identity achievement process is constrained by internal social forces and rendered largely symbolic rather than bloody.

This, in turn, has implications for policies of intervention and control I'm not suggesting that youth groups should not be subjected to any social control - rather that we should be concerned with the manner of that control. Although the social frameworks and rituals which govern behavior on the soccer terraces and elsewhere have a timeless and enduring quality, their effectiveness can be seriously eroded by the kinds of hysterical outrage and misguided attempts at punitive external control we have witnessed over the last five or six years in Britain in particular.

Once the internal controls are eroded then a distinct change in the pattern of aggressive behavior is observed - and this, to some extent has already happened on the soccer terraces - with quite tragic consequences.

In conclusion, I would like to end on a possibly provocative note by referring to a piece of graffiti which used to be on a wall in South London. It said "A little bit of violence never hurt anyone". Now, it may be that this is not too far from the truth. Instead of social scientists getting overly optimistic about the non-aggressive society - some, as yet unrealised, Utopia - we might be more realistic. We might recognize that some of the patterns of youth activity we witness are, to a large extent, illusions of violence rather than the real thing. And we might decide that these

timeless agonistic rituals are the ones in which we should be least eager to invervene.

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FIRST STEPS IN THE FUNCTIONAL ANALYSIS OF AGGRESSION

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Over recent years an immense amount of literature has been produced concerned with aggressive behavior, with even a journal devoted solely to this topic. This wealth of information perhaps reflects our concern about the incidence of aggression in society, but also our ambivalence about its value.

In general, most people would presumably be opposed to hurting others and would agree that society would be improved if there were less violence and aggression. But we all exhibit aggressive behavior to a greater of lesser extent. We may spank our children, scold our spouses, throw things or hit out in anger, insult others, or attack those who threaten us. We even institutionalize some forms of aggressive behavior; many schools, for example. possibly encouraged by parents. still practise corporal punishment.

There also appears to be a widespread vicarious enjoyment of violence of one kind or another, with concern about such things as the popularity of home videos portraying extreme violence. There are those who enjoy watching the physical violence exhibited in the boxing ring. The popular press panders to the morbid interest of its readers in real life example of extreme violence, reporting for example on 'violence on the football terraces'; yet evidence suggests that when such outrage first started, actual physical violence on the terraces was a relatively rare phenomenon (Marsh, 1978). In other cases, for example rape, the level of concern appears not to have been as great, despite the relative frequency and severity of attacks.

Clearly, in society as a whole and in subgroups and cultures within society some forms of aggression are sanctioned and others

condemned. Whether aggressive behavior is sanctioned or not we can assume that wherever it is displayed it serves some function or other for the individual or group concerned. Establishing the function or purpose of aggressive behavior is, at least in part, the concern of the present paper.

To date, we have seen a series of approaches looking at different aspects of aggression, employing different methodologies based on different theoretical constructs. In order to contrast these approaches with our own the major ones are briefly described below.

APPROACHES TO AGGRESSION

Psychoanalytic

One of the earliest determined attacks on the problem came from Sigmund Freud. The notion of Thanatos, an instinct towards death and destruction, was central to Freud's account. Freud himself was unhappy with his theory despite a large number of modifications. In the words of one of his recent adherents, Freud's theory "proved of far more use to artists and novelists than to clinicians" (Stafford-Clark, 1967, p. 159).

Ethological

The drive model of Lorenz also assumes an innate drive for aggression but unlike Freud's account it argues that aggression has a positive function i.e. preservation of the individual and the species.

The ethological work generally involves the study of aggression in the setting in which it normally occurs. The work of Peter Marsh (1978) exemplifies this in the study of human aggressive behavior.

Physiological and Biological

This approach involves the elucidation of biological and physiological mechanisms underlying aggression. For example Montagu (1968) suggested that a high frequency of XYY chromosome patterns was found amongst criminals. He hypothesised that aggressiveness in the male was derived from his Y chromosome and that the addition of another Y gave him, in effect, a double dose.

The intracranial elicited aggression studies, (cf. Delgado, 1966) demonstrate that aversive stimulation can elicit attack, indicating the possible role of specific neural circuits in aggression.

Psychometric

The approach has most commonly involved the determination of personality characteristics associated with violence. Megargee (1966), for example, has suggested that homicidal individuals could be divided into two main personality types. The overcontrolled personality is characterised by rigid inhibitions against aggression until the instigation to aggression accumulates to a level which exceeds the excessive inhibitions. Conversely, the undercontrolled personality is characterised by low levels of inhibition against the expression of aggression and requires little instigation to behave aggressively.

Experimental

This approach cuts across various theoretical boundaries, the essential ingredient being the determination of the relationships between aggression and experimentally manipulated variables (See e.g. Ulrich and Azrin's 1962 study of shock-induced fighting; Bandura et al.'s 1961 work on modelled aggression, and Dollard et al.'s 1939 work on frustration).

Cognitive

The more recent cognitive approaches typified by Novaco's (1978) analysis of anger control involve the consideration of the role of appraisals and expectations in the individual's response to provocative stimuli.

Whilst each of the above approaches has made substantial contributions to the study of aggression, the field as a whole has suffered from a lack of integration, workers within a certain approach rarely looking beyond their own perspective. In particular there has been much disagreement regarding definition.

PROBLEMS OF DEFINITION

The everyday use of the term 'aggression' invariably implicates the notion of intent. An individual is called the aggressor whom it is believed 'intended to do harm to others'. The establishment of intent also effects the outcome of the legal process when dealing with violent crimes. Unfortunately for the researcher, cognitive constructs like intent are not only difficult to measure but their status as causal antecedents is open to question. The problem of invoking intent as a causal antecedent was put succinctly by Bandura and Walters (1963) who wrote "The main problem ... is that intentionality is not a property of behavior, but refers to antecedent

conditions which frequently have to be inferred from the behavior of which they are supposedly an essential ingredient" (p.365).

An attempt to bypass the difficulties inherent in using intentionality as part of a definition has been to define aggression in terms of its consequences. Specifically, this usually means harm or injury to others. But as Hinde (1978) pointed out, "if the primary feature by which we define aggression is related to consequence (namely harm to others) the items included may have almost unlimited causal heterogeneity". We might, for example, be compelled to include the behavior of an individual who accidentally bumps into someone else causing physical hurt. This problem of definition has led Kaufman (1970) to assert that accidental "aggressive" acts cannot be distinguished from other non-accidental aggressive acts unless the notion of intent is invoked.

Another attempt at a simple operational definition of aggression is in terms of the topographical features of the behavior. This kind of definition is most common amongst ethologists. The approach involves the identification of species-specific behaviors which are potentially harm-producing, for example the "beating movement" described by Blurton Jones (1967).

Topographical definitions, however, also tend to become overinclusive if adhered to strictly. Thus a surgeon cutting open a patient might be labelled aggressive if topographical criteria alone were considered.

What is missing from these attempts at definition is an analysis of the variables of which the behavior is a function. Behaviors which have similar consequences may be a function of very different antecedent conditions. Behaviors which have similar topographical features may be controlled by quite dissimilar variables. On the other hand, behaviors which are topographically distinct may be functionally similar in terms of their relationship to controlling variables.

Defining aggression in terms of antecedents, consequences or topography alone only alludes to one possible aspect of the relationship between behavior and the environment, and without specifying the nature of that relationship. It is inevitable that such definitions become characterised by overinclusiveness and lack of specificity.

Any aggressive interaction is going to involve interrelationships between behavior, antecedents and consequences, in any aggressive episode some variables being more powerful than others. This provides a starting point for a functional analysis of the basic processes involved in aggression.

FUNCTIONAL ANALYSIS AND AGGRESSION

The essential characteristics of a functional analysis have been clearly outlined elsewhere (see e.g. Slade, 1982; Owens and Ashcroft, 1982). Briefly, a functional analysis is concerned with specifying the variables of which behavior is a function and determining the form of the relationships between the behavior and the relevant variables. Typically, the starting point for a functional analysis is to observe current behavior and its temporal relationship to other observable events and then to establish to what extent those events serve to increase or decrease the probability of the behavior and the severity of the problem. In the case of aggressive behavior it is possible to make a conceptual distinction between two basic processes corresponding to antecedent and consequent events. Where antecedent events, i.e. those occurring before the behavior of interest are prepotent, the ensuing aggressive behavior may be called 'reactive'. Where consequent events, i.e. those following the behavior of interest are prepotent, the behavior may be called 'operant'.

It is unlikely that in any aggressive episode either antecedents or consequences will be the sole controlling variables. Most aggressive episodes are likely to have both reactive and operant components. Later, more complex cases will be considered where the two basic processes interact and also where other variables serve to modify and moderate the basic processes. To begin, however, it is convenient to describe those cases which approximate to the basic processes.

Reactive Aggression

At a purely descriptive level reactive aggression is characterised by the ease with which an individual is 'triggered' into aggressive outbursts with no obvious reinforcing consequences. This kind of aggression has been variously referred to as angry, hostile, annoyance-motivated. irritable and elicited aggression. Seligman (1975) has said anecdotally, "anyone who has bumped his head on a car door and becomes furious, yelling at the passengers, is familiar with the phenomenon". At a more disturbing level, one might include the more violent impulsive outbursts which are not apparently directed towards the achievement of non-aggressive goals but which seem more powerfully controlled by antecedent aversive 'triggers'. These may range from seemingly trivial events to very noxious stimuli. Aversive antecedents may be divided into two categories. First there is aggression associated with the withdrawal of positive reinforcers or blocking or thwarting of attempts to obtain positive reinforcers. The frustration-aggression hypothesis is, of course, based on this kind of aversive control of behavior. The procedure has also been referred to as extinction-induced aggression and can be demonstrated with various species and reinforcers. Azrin, Hutchinson

and Hake (1966), for example, observed aggression in pigeons elicited by a period of non-reinforcement. Kelly and Hake (1970) found that extinction could also elicit aggression in human subjects. Similarly, the term schedule-induced aggression (q.v.) has been used to describe aggressive behavior associated with periods of non-reinforcement on various complex schedules of reinforcement.

The frustration-aggression theorists originally postulated that aggression always presupposed the existence of frustration (Dollard et al., 1939). The findings of later studies involving the presentation of very noxious stimuli meant that this view had to be modified. Perhaps the most systematically studied type of reactive aggression involving the presentation of noxious stimuli is the phenomenon known as "shock-induced fighting" (SIF).

Ulrich and Azrin (1962) demonstrated that fighting could be initiated by placing animals in a small, restrictive chamber and then administering electric shock. Such elicited fighting appears to constitute a remarkably strong response, in the sense of being highly resistant to changes in a number of parameters. Amongst the variables of importance in shock-elicited aggression are the species, the exact form of aversive stimulation used, an interaction between the type of target and the species and the size of the environment. The roles of such variables are outlined in Figure 1. With Ulrich and Azrin's procedure the elicited aggression was unlikely to be negatively reinforced (e.g. by the withdrawal of shock) because neither of the subjects had any responsibility for the aversive stimulation. Rather, what Ulrich and Azrin appeared to have demonstrated was an 'uncontaminated' example of reactive aggression powerfully controlled be antecedent aversive stimuli. However, even though this aggression appears as an unlearned general response to aversive stimulation it can be modified by environmental consequences and is also sensitive to various other 'modulating' variables. For example, Hynan (1976) found that the position of a restrained target rat affected the frequency with which it was attacked by another rat which was shocked intermittently. A supine 'submissive' type posture resulted in more attacks than an upright 'threat' posture. Azrin (1970) also found that the aggressive response could be eliminated by consequent presentation of the eliciting antecedent, i.e. shock.

Of course, where the target is also responsible for the source of aversive stimulation then the organism becomes exposed to various reinforcing possibilities. In addition it has been demonstrated that, following aversive stimulation, the opportunity to attack can itself reinforce operant behavior (Azrin, Hutchinson and McLaughlin, 1965). Also when actual physical escape is possible, escape becomes totally prepotent over attack (Azrin et al., 1967; Whitman and Doleys, 1973). Finally, the basic reactive process may have wider generality as a result of secondary effects; various researches have demonstrated that stimuli paired with unconditioned stimuli eliciting

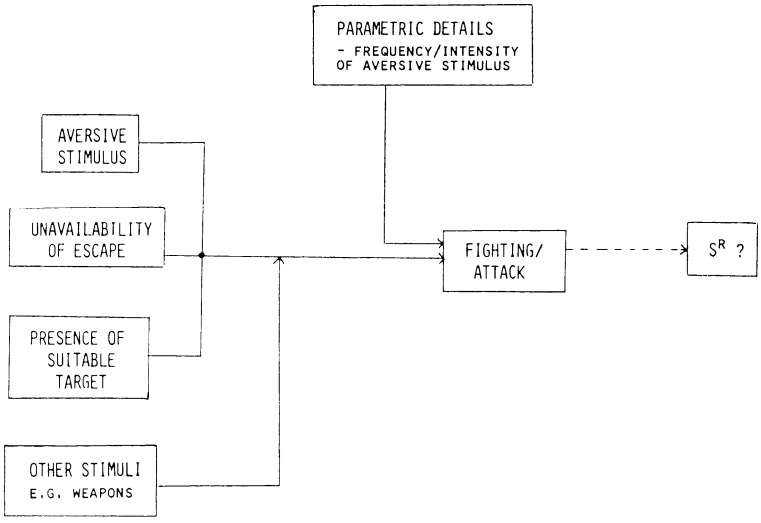

Fig. 1

aggression can also elicit fighting (e.g. Vernon and Ulrich, 1966; Lyon and Ozolins, 1970).

Operant Aggression

Operant aggression is characterised by aggressive behavior which is purposive, or provides a means to an end. More formally, it is aggressive behavior maintained by its consequences, that is to say by positive or negative reinforcement.

Negatively reinforced aggression involves the avoidance, elimination or attenuation of a punishment contingency. For example, attack may be reinforced by preventing a potential attacker from attacking first, or by preventing the recurrence of an attack. As early as 1948 Miller found that two rats would fight when such behavior was negatively reinforced. In his experiment an electrified grid on which the rats stood was only turned off when they fought, and it is of course possible that the results were confounded by the tendency for elicited fighting. Patterson et al., (1967) observed the development of negatively reinforced aggression in nursery children. They observed that initially passive children, if frequently victimised by aggressive peers, would eventually counter-attack. If the initial tentative counter-attacks were successful the rate of aggressive behavior was increased.

Aggressive behavior can also be positively reinforced. Reynolds, Catania and Skinner (1963) showed that animals will emit aggressive responses in order to obtain reward. Similarly Azrin and

Hutchinson (1967) gave pigeons food dependent on attacking another pigeon and found that the frequency of attack increased. With humans, social reinforcers may be the most usual positive reinforcers of aggression, as for example with peer approval in a male group for aggressive 'machismo' type behavior. A child might learn aggressive behavior because they are reinforced by parental attention. Walters and Brown (1963) showed that a group of boys, whose punching (of an automated doll) had been reinforced, later showed a higher level of operant aggression than control subjects.

Vicarious reinforcement has also been shown to have a powerful effect on aggressive behavior. Bandura (1965) demonstrated that short periods of observing aggressive behavior in adults led children also to show aggressive behavior; this effect was enhanced if the children had observed reinforcement of the adults' aggressive behavior.

Another dimension of operant aggression concerns the nature of the reinforcers involved. Aggressive behavior may be maintained by reinforcers which have a clear link to the aggressive behavior or by ones which show no obvious relation. For example, there are consequences supplied by the victim such as compliance, crying, defensive postures and actual physical indications of hurt which may serve to reinforce the aggressive behavior and which are intrinsic to the aggressive encounter. This kind of reinforcement may also complicate basic reactive processes as seen in the Hynan (1976) study.

On the other hand, aggressive behavior may also be reinforced by factors not explicitly related to aggression, for example food and sexual contact; such effects may be intensified where there is competition for these.

A rough analysis of the roles of different factors involved in operant aggression is outline in Figure 2.

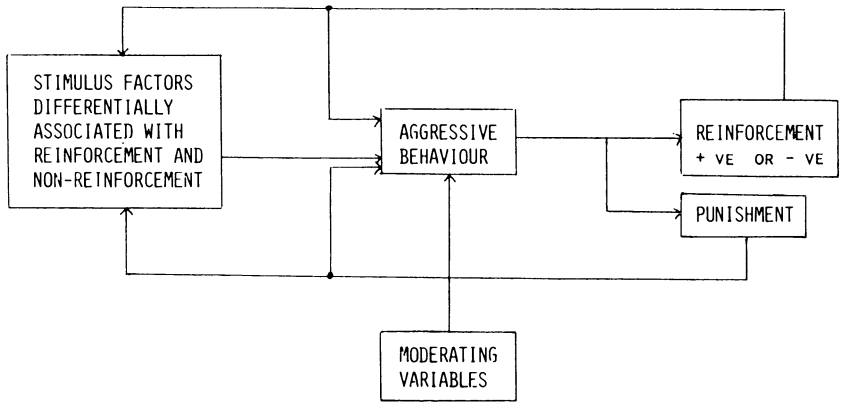

Fig. 2

Interactions Between Basic Processes

Reactive and operant processes may interact in a number of possible ways, historical factors in particular bearing on current aggressive behavior.

Knutson et al., (1980) demonstrated that a history of negatively reinforced aggression, following aversive stimulation, resulted in an increased probability of shock-induced aggression in a later test situation. The authors also demonstrated that the pattern of attack described as escalation can be evoked by a history of aversive antecedents. The authors point to the possibility that specific histories could account for observations of human aggression in situations where the aversive antecedents would not normally be sufficient to evoke aggressive behavior. The possibility also presents itself of the individual becoming so sensitized to the discriminative stimuli associated with reinforcement of aggression that these stimuli themselves become powerful controlling antecedents, for the aggression to occur.

Interaction effects between basic processes may also have a bearing on the phenomenon of learned helplessness (Seligman, 1975). Mair et al. (1972) for example, showed that rats who had a history of being able to escape shock attacked the most when subsequently shocked, as compared with rats who received inescapable shock (the learned helplessness procedure).

The possibility also exists that within any aggressive episode there may be switches from one controlling factor to another. For example, social reinforcement of the instigation of attack may start off an aggressive encounter which is then subsequently dominated by reactive elements (cf. Zimbardo, 1969). This kind of interaction of basic processes may also account for such exotic phenomena as "amok" (Schmidt et al., 1977).

The factors involved in the interaction between basic processes is shown in Figure 3. Having summarized these, it is possible to consider the role of other variables known to contribute to aggression in terms of their involvement with such processes.

FACTORS AFFECTING BASIC PROCESSES IN AGGRESSION

The Social Environment

Much research, both experimental and ethological, attests to the influence of the social environment on aggressive behavior. Such a variable can be seen to have several opportunities to influence aggressive behavior. Thus, in a reflexive process the presence of a

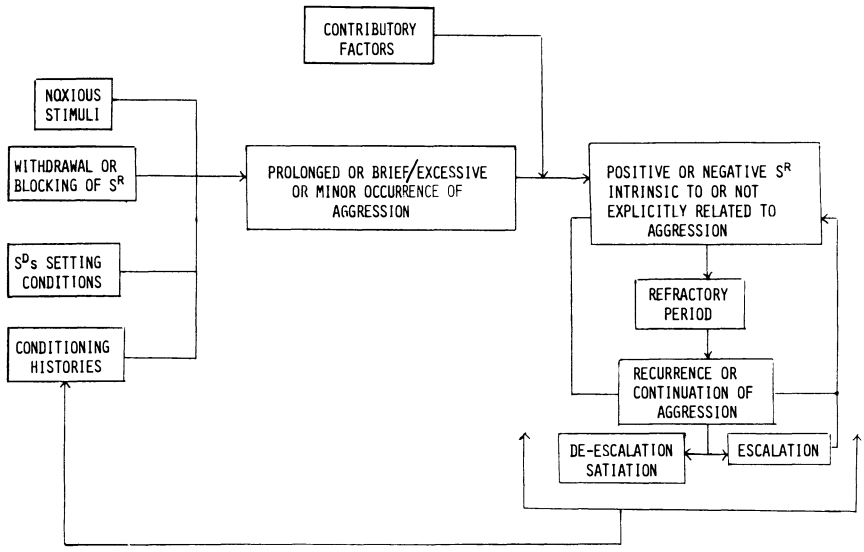

Fig. 3

social group may serve to intensify the aversiveness of trigger stimuli (e.g. by implying some kind of public humiliation). Such a social group will thus increase the probability of reflexive fighting occurring. Conversely some social groups, for example a peer group consisting of pacifists, may serve to indicate punishment of aggression, or to indicate that aggressive behavior may not be possible. Under such circumstances there is evidence to suggest that reflexive aggression will be inhibited.

Thus, with respect to reflexive aggression, it is not possible to make an unequivocal statement regarding the effect of the social environment without specifying precisely the detailed functions of the specific social group for the individual concerned.

A similar position obtains in the consideration of operant aggression. Here we can identify several possible roles of a social environment including a source of punishment or reinforcement, possibly intense and immediate, and a source of a number of discriminative stimuli. These latter may serve to increase or decrease the probability of aggressive behavior depending upon their relationship to the contingencies operating. Thus, a group of fellow football supporters may indicate a potentially high level of reinforcement contingent on aggression: a group of policeman, on the other hand, may indicate to the same individual a high probability of punishment. Again it is clear that, with respect to operant aggression, the effects of a social group are complex and will depend on the functional significance of the group for the individual concerned.

As with reflexive aggression, it seems likely that reinforced aggression may be affected through a social group moderating the effect of other variables as for example when interpersonal dominance serves also to impress an audience or when membership of a large group gives an air of immunity from punishment ('safety in numbers'). A more subtle aspect of this operates when the person indulging in violence serves to influence the individuals' value system, making violence less susceptible to self-control via self-punishment.

Finally, of course, the social group serves as a rich source of verbal guidelines of 'rules' of behavior. It is important to note here that much human aggression is probably controlled by the cultural norms of society which proscribe undue violence. Such 'rules of behavior' are rarely explicit and common to all members of society. Rather each member is likely to generate a personal set of rules reflecting individual experiences within that society. Such rules may exert only a weak control, reflecting the inconsistency of real-life contingencies. It follows that such rules will be particularly susceptible to modification or disruption in a subgroup with immediate and consistent rules which conflict with those of the individual. As a result, individuals in certain social groups may modify quite dramatically their views of what if 'right' and 'wrong', with obvious implications for self-control in aggression.

The social environment, then serves as a complex source of variables influencing basic processes. It should be noted that many of the functions traditionally ascribed to the social environment can be subsumed under the headings above; for example, the modelling occurring in a violent social group can be seen as a specific example of the role of discriminative stimuli.

Drugs

Inevitably, research with human subjects, difficult at best in the field of aggression, is of limited scope when we come to consider the effects of drugs on aggression. Apart from mild drugs like alcohol and marijuana, it is difficult to conduct experiments investigating the role of such substances on aggression. Such research as has been done has typically been difficult to interpret, often using dependent variables which are far from satisfactory. Nevertheless it is probably possible to draw at least a few general conclusions. Thus, alcohol has generally been found to act as a facilitator of aggression, although there appears to be little or no research in this field which distinguishes between emitted and reactive aggression: other evidence (q.v.) suggests that this may be important. More precisely, alcohol appears to inhibit aggression at low doses, higher doses serving to enhance. Whilst this can be summarized in terms of a dose-effect curve for alcohol, it is perhaps interesting to consider that the different doses may operate on different pro-

cesses. It is conceivable, for example, that a low dose may serve to decrease the aversiveness of eliciting stimuli thus removing reflexive elements form measured aggression. More substantial doses may then provide a general disinhibition of punished behavior (including aggression), leading to a net increase.

The picture with respect to drugs of abuse is generally more difficult, since these substances are not usually appropriate as independent variables in human experiments. Such research is not entirely impossible, however. Marijuana, for example, has generally been found to decrease aggression, although systematic information is not available regarding such factors as dose-effect curves, or regarding the importance of specifying the type of aggression. Certainly such research commonly reports a minority of subjects for whom marijuana serves to enhance aggression, suggesting the role of as yet unspecified variables.

Research into animals is, of course, extensive, far too extensive for cover here. A mass of research has looked at the effect of various drugs in operant behavior. For the present it seems reasonable to use such research as a basis for considering drug effects on operant aggression. Should such aggression later be shown to have properties making it pharmacologically distinct from other operant behaviors, this would of course suggest caution in interpreting results from non-aggressive operant behavior. Whilst no hard evidence is available on this point, there are plausible reasons for considering such a possibility.

Good reviews of the interactions between drugs and operant behavior may be found in Blackman and Sanger (1978). Briefly the main impact of such research has been to emphasize the interdependence of drug effects on properties of the behavior and its controlling schedule. Thus, such factors as the rate of occurrence of a behavior, the type of schedule according to which it is maintained, and the specific types of reinforcers and punishers involved can all contribute to determine whether a specific drug serves to enhance, inhibit or disrupt a behavior. To this must, of course, be added pharmacological factors such as dose-effect curves and toxic and tolerance effects. With respect to aggression this implies that knowledge of how a drug will affect (operant) aggression will require a detailed specification of a large number of factors.

Turning to reactive aggression, we once again face a pharmacologically complex picture, but simplified a little by the fact that the dependent variable of interest is directly measured in such research. As with operant behavior such factors as details of the controlling schedule can markedly influence the effect of drugs. Thus, P-chlorophenylanaline appears to enhance reactive fighting when long inter-trial-intervals are used but not with short inter-trial-intervals. A recent review of drug effects on such forms of

aggression (Sheard, 1981) highlights, amongst the overall complexity of the subject, some of the main results of such work. These suggest that norepinephrine (NE), 5-hydroxytryptamine (5HT) and cholinergic interference can all influence reactive aggression. Results with both NE and 5HT have been conflicting, and appear to relate to the body's response to such interference. Thus, chronic administration of tricyclic antidepressants and monoamine oxidase inhibitors, which prolong NE in the synapse, increase reactive aggression. An increase in such aggression is also found in administration of dopamine, which lowers central NE. These apparently conflicting findings may be resolved by noting that the increase following dopamine takes some time to develop, suggesting a sensitivity of NE receptors and a subsequent effect similar to that of raised NE.

Perhaps of particular interest in the present context is the fact that drugs can have differing effects in reactive aggression and operant behavior (and by implication operant aggression). Cocaine, for example, has been shown to disrupt reflexive aggression at doses which leave operant behavior unaffected. Increasing the dose to one at which both operant behavior and reactive behavior are disrupted leads to tolerance developing when measuring the effects on reactive aggression with no evidence of tolerance as reflected in operant behavior. If the operant behavior used in such studies forms a suitable model for operant aggression, such results have both theoretical and practical significance. From a theoretical perspective the distinction between reactive and operant aggression is emphasized. From a practical perspective the results imply that drug treatment of aggressive behavior should appropriately proceed only on the basis of a clear behavioral analysis of the type of aggression.

Hormones

A considerable body of research has investigated the role of various hormonal factors in the production of aggressive behavior. Such research is not without its critics but nevertheless it does seem clear that certain hormones can be implicated in aggressive behavior in various species. Most prominent amongst the work on hormonal influences have been studies of the role of, male sex hormones or androgens. Thus, in several species of rodent, castration has been reported to reduce aggression with such aggressiveness returning to normal if testosterone is injected. Similarly, in a study of aggressiveness in monkeys (Rose et al., 1971) serum testosterone levels were correlated with behavior assessments of aggressiveness. It is commonly believed that the role of androgens is twofold. Firstly, androgens are seen as having a development role, sensitizing the brain so as to enable it to respond differentially to the presence of testosterone in adult life. Secondly, it is believed that the presence of testosterone is necessary for aggressive behavior to be exhibited in appropriate situations.

Studies of human subjects are, almost inevitably, less common, although some research of direct relevance has been reported. Thus Doering et al. (1974) reported a small but significant correlation between testosterone level and self-reported hostility. Yalom et al. (1973), in a study of 20 sons of diabetic mothers, found that by age 16 the boys showed significantly less aggression than a control group; the importance of this study is that the mothers of the children studied had been given progesterone and oestrogen during pregnancy with the suggestion that this has somehow 'feminised' the brain leading to lower aggression.

Such research is not however without its problems. Thus, in a later report, Doering et al. (1975) reported that the original correlation between hostility and hormones was weaker than had been reported and indeed non-significant (in addition it should be noted that self-reported depression correlated much more strongly with testosterone levels). The animal research, too, is far from clear. Thus, Moyer (1974) reported no lessening of dogs' aggressiveness following castration. Moreover, the picture appears to be complex even for those species for which a relationship is apparent. Rose et al. (1972) paired two male monkeys lower in dominance with two other female monkeys whom they could dominate. Their testosterone levels rose dramatically but fell again when returned to a group in which their social ranking was low.

Obviously the role of hormones in aggression is far from clear. One striking feature of the research is that the typical measures of aggression used fail to distinguish between reactive and operant aggression. Since these two appear to be pharmacologically distinct, it may be that they are also distinct in terms of the role of chemicals such as hormones. If so, the failure to specify the type of aggression could do much to explain the confusion in the findings. Perhaps the best that can be said for the moment is that hormones and aggressive behavior may interact but that such interaction is as yet too little understood to permit definite causal statements.

Of course androgens are not the only hormones to have been implicated. ACTH, for example, has been shown on chronic administration to reduce aggression, and corticosterone, on acute administration, has been shown to increase aggression. Such research however shares many of the problems of the androgen research, and in a preliminary paper of this nature it would be inappropriate to go into the area in depth.

Personality Factors

A number of individuals have attempted to specify particular personality characteristics believed to typify the aggressive indi-

vidual. Eysenck (1979), for example, has attempted to extend his general theory of crime and personality to the area of violence, arguing that extraversion, in particular, can be associated with violence and calling for a reversal in "the general climate of permissiveness". Eysenck's theories of crime have not, in general, fared well in the face of systematic research (e.g. Hoghughi and Forrest, 1970) and have yet to make a substantial contribution to research specifically concerned with violence.

More directly concerned with violence have been the studies of Megargee (e.g. Megargee, 1966) relating the notion of over and under-controlled hostility to aggression. Related to Eysenck's basic theory, this adds a further notion that extreme aggression could be related to an overcontrolled personality. In a study investigating this relationship Blackburn (1968) studied samples of Special Hospital patients with a history of extreme violence and found "extremely assaultive" patients to be significantly more overcontrolled, introverted and conforming than "moderately assaultive" patients.

From a functional viewpoint it is easy to see how the individual who tends not to be violent in most situations may eventually show extreme violence. Firstly, the overcontrolled individual has little if any 'practice' at being violent. Such an individual is therefore unlikely to be skilled at adjusting the degree of violence to the exigencies of the situation, and hence may show an extremely violent reaction out of all proportion to the precipitating circumstances. Secondly, the overcontrolled individual is unlikely to have acted violently in response to provocation by others. Whilst such provocation would normally be suppressed by violent response, in the present circumstances it is left free to be repeated or even to escalate. It is possible, therefore, for the provoking circumstances to reach an extreme level, thereby producing a high response strength and hence a high likelihood of extreme aggression.

Environmental Factors

Weapons. The contribution of weapons to the likelihood of an aggressive episode has been investigated in a number of experiments. Thus Berkowitz and LePage (1967) showed the presence of guns to produce a higher level of aggressive behavior in experimental subjects. Commenting on the failure of some experiments to replicate such findings (e.g. Buss et al., 1972) Berkowitz has argued that several factors may interfere with the effect, including anxiety reactions in those who see guns as primarily dangerous or terrible objects, and undetectability of reactions in subjects who are not otherwise highly aroused. Additionally Berkowitz argues that subjects may exert greater control over their aggression if suspicious about the experimental hypothesis. Turner et al. (1977) argue for a respondent conditioning explanation of the effect whereby the sight

of weapons becomes aggression-facilitating to the extent that they have been associated with reinforced aggression and inhibitory to the extent that they are associated with punished aggression. It seems unclear from their account why this should be distinguished from the general notion of a discriminative stimulus familiar to operant conditioners. At present it seems that many stimuli are capable of serving such discriminative function and therefore of influencing operant aggression. Whether the stimuli would be similarly capable of enhancing reactive aggression is not clear.

Other Environmental Factors Inevitably a range of other factors may influence the probability of aggression. Most obviously, environmental factors may serve similar functions to those discussed in the context of the social environment. Thus, just as another individual may constitute an aversive stimulus producing reactive aggression, so may aspects of the physical environment (as indeed in the original Ulrich and Azrin experiments on reactive aggression). Similarly, such factors as overcrowding may serve to potentiate other factors producing aggression or may increase the likelihood that the individual will be exposed to factors causing aggression. Such factors may represent no more than common exemplars of those already discussed, and whilst detailed consideration may be of interest they add little to the processes already described.

In a similar vein the considerable research on screen violence may reflect no more than specific examples of the general processes discussed. The research is too voluminous to consider here but has been variously reviewed (see e.g. Brody, 1977). In general, such research has been inconclusive, and the variously conflicting results suggest that important variables remain to be specified and controlled. One such variable is the total amount of exposure, a variable which may render this research of new importance with recent developments in the entertainment industry. In the past any given episode of screen violence was often considered to be of minor significance since the time spent watching was relatively brief. With the advent of the home video industry people are now able continually to play and replay scenes of violence: the impact, if any, of such episodes remains to be determined. Certainly, if anecdotal evidence is to be believed, films with a predominantly violent content account for a substantial percentage of the films borrowed from video libraries.

Disturbingly, a second variable relevant to the availability of video films may be of some importance. Research on screen violence has often suggested that the violence seen is not perceived as 'real' by the viewer, with the implication that unreal violence is less likely to be influential. The appearance of what have come to be called "snuff" videos (from the title of one of the first examples) may be important here. In such films the violence portrayed is

claimed by the producers to be genuine, filming having occurred "where life is cheap". The influence of such material has yet to be subjected to empirical study.

Whilst the factors described above are only some (although possibly some of the more important) of those influencing basic processes, it is clear that even considering these few implies a model of some considerable complexity. The first steps in such a model are outlined in Figure 4. It will be seen that not only are the two basis processes affected by a number of different factors, but that these factors themselves are capable of affecting each other; different schedules of reinforcement and punishment, for example, will affect the functional significance of discriminative stimuli. Some such relationships seem likely even though they fall outside the immediate scope of the present paper; it is to be expected, for example, that physiological factors will affect the impact of certain drugs. Perhaps of most note for the present is the observation that there is, in principle, no problem in integrating within a single model such diverse approaches as the physiological, pharmacological; and psychological, despite their historial separatism.

Interactions Between Processes

It is clear that a considerable number of variables may be involved in the production of aggressive behavior, with at least two basic processes (the reactive and the operant) being implicated in the general area. At this stage it is perhaps appropriate to consider ways in which these may interact, taking as examples 'types'

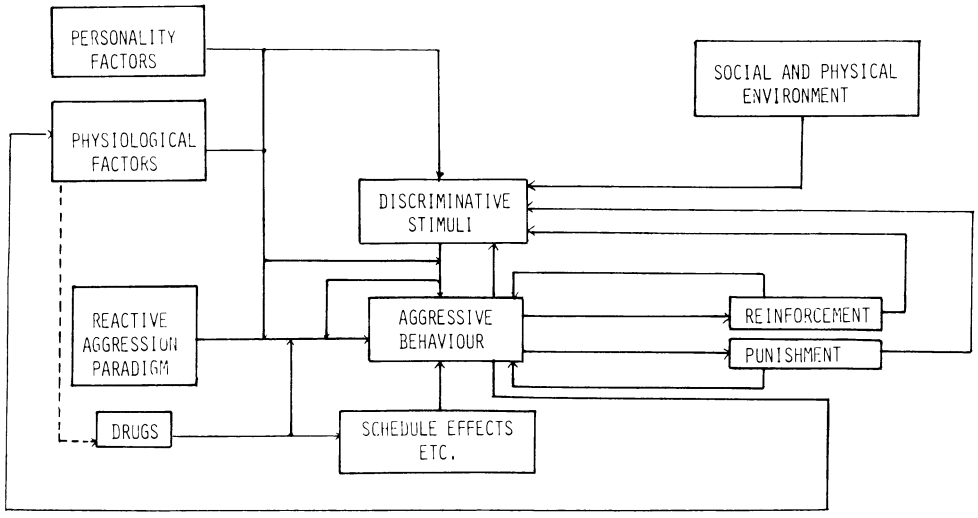

Fig. 4

of aggression which have been described in the literature. Of such examples, the following illustrate how traditional concepts may be redefined in functional terms.

Territorial Aggression A number of studies, mainly from an ethological background, have illustrated the tendency of many species to demonstrate aggression when 'territorial space' has been invaded. Such a phenomenon has been subject to a number of somewhat unsatisfactory attempts at extension to humans (see e.g. Ardrey, 1966, Reed, 1970). Leaving aside the relevance of the work to human society, it is apparent that such episodes are to be expected if an individual finds invasion of 'territory' aversive. Note that this is the only assumption that needs to be made; once this is made, the occurrence of aggression follows naturally. Since invasion is aversive, and aversive stimuli prompt reactive aggression, it should not be surprising that reactive aggression occurs. Moreover, since such aggression typically results in the driving away of the intruder, it is apparent that negative reinforcement processes are likely to operate. Territorial aggression, then, can be expected merely on the basis that invasion of territory is aversive; the aggressive behavior then follows as a result of reactive and reinforcement processes.

Frustrative Aggression Much early experimental work on aggressive behavior centered around the concept of frustration. On considering such research, however, it is clear that many of the procedures used to introduce aggression constitute methods of introducing aversive stimuli to an individual. Thus the 'goal blocking' procedures which have been extensively used (e.g. Lagarspetz, 1964) can be construed as tantamount to the introduction of some aversive event into a situation, with a consequent high probability of reactive aggression. There is also the possibility, in at least some settings, of such aggressive behavior being adventitiously reinforced, making the process more complex but by no means incomprehensible.

Schedule-Induced Aggression As with the concept of frustrative aggression, the notion of schedule-induced aggression can be linked with the more general processes described earlier. As is well known, amongst the factors associated with aggressive behavior is the schedule of reinforcement operating with respect to other behavior. In particular, aggressive behavior has been frequently noted during the operation of fixed-interval schedules of reinforcement. Specifically, a high probability of aggressive behavior occurs immediately after reinforcement, this probability decreasing with the proximity to succeeding reinforcement. Whilst this appears paradoxical, or at least puzzling at first, the paradox disappears with close consideration of the concept of a reinforcer. Whilst the lay reader tends to think of reinforcing properties as some characteristic of a stimulus or event, those familiar with operant conditioning see no problem in the fact that the same physical event may have simultaneously re-

inforcing and punishing properties, depending (in part) on how it is scheduled. From this perspective, a stimuli which reinforces a behavior on a fixed-interval schedule also reliably indicates the unavailability of reinforcement immediately afterwards. The same event thus serves as a reinforcer and negative discriminative stimulus - and in this latter capacity has, of course, aversive properties capable of eliciting reactive aggression. There is also again the possibility of some adventitous reinforcement by subsequent delivery of the next reinforcer, although it seems unlikely that this effect, if it occurs at all, will be substantial.

CONCLUSION

It will be apparent from what has been said that aggression is an extremely complex affair. Even taking just two basic processes and a short list of contributory factors a mass of interrelationships is obtained, with a number of potential pathways to aggression. Such a model has several implications even at such an early stage.

At the clinical level, for example, the unreality of topographical definitions is emphasized. In particular, it becomes important to remember that the kinds of process which lead to the original form of aggression need not be the same as those which later serve to maintain it. The implication is that a detailed analysis of the aggression will be necessary in order that a suitable intervention be selected - it may be the case, for example, that the type of anger control described by Elaine Alves in the present symposium, whilst effective on reactive aggression, may have little or no effect on operant aggression. This may be of particular importance in institutional treatment where aggressive behavior within the institution may not be of the same basic type as that which first led to admission. Similarly, the suggestion that the two basic processes described may be pharmacologically distinct implies the need for a thorough behavioral analysis before imposition of any drug treatments.

With respect to operant aggression in particular, it is important to note that precise specification of variables like reinforcers may be crucial to success. Many behaviors, including presumably much aggressive behavior, are maintained by the concurrent operation of several reinforcers. It can be shown that controlling only one of such a group of reinforcers may lead to nothing more than a slight reduction in the overall frequency, even under ideal conditions. In such a situation cavalier attempts to identify important variables may fail because of the lack of apparent success of intervention. Finally, the use of a functional perspective acts as a timely reminder that variables need to be defined by their effects - what is innocuous to one person for example, may be sufficiently aversive to elicit reactive aggression from another.

At a theoretical level, too, the model has important implications. The most obvious of these is the provision of a basic structure within which traditional concepts of aggression can be analyzed. At a more fundamental level the model provides for an integration of approaches which, if not actually considered incompatible, have traditionally been seen as separate. Finally, it should be noted that nebulous concepts such as 'intent', frequently seen as unavoidable in the aggression literature, are not needed within the present framework. Indeed, it is notable that, as is common within a functional perspective, the analysis can stand independently of any particular theoretical perspective or orientation, hopefully meaning that opposing theorists can begin to lose some of their own aggression, traditionally directed at each other.

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THE CONTROL OF ANGER IN THE 'MENTALLY ABNORMAL' OFFENDER

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'MENTALLY ABNORMAL' OFFENDERS AND ANGER CONTROL

The use of the term 'mentally abnormal' offenders in the context of this paper is probably somewhat misleading. It is not particularly used here to reflect the psychiatric status of the offenders in the conventional sense but mainly to indicate the location characteristics of the group under discussion. Basically, 'mentally abnormal' offenders in the context of this paper means offenders who have been disposed of in treatment/training settings.

When one looks at the offenders in treatment settings such as psychiatric or Special Hospitals it becomes apparent that the client group comprises a range of offence categories (Dell and Parker, 1979). These fall roughly into the two categories of:

- offences against property, whether acquisitive or destructive and
- offences against persons, usually aggressive.

It is difficult to conceptualize acquisitive offences as functionally related to problems of anger control Therefore the offender categories which will be considered in relation to anger control are those which involve aggression against property or persons.

At this stage it is pertinent to mention the psychiatric status of aggressive offenders who might benefit from training in anger control. Because of the degree of active client co-operation and functional intellectual level required by the cognitive component in anger management, it would not be appropriate to use such an approach with floridly psychotic or subnormal individuals. This leaves those individuals whom our psychiatric colleagues would label as personality disordered or individuals who are no longer floridly psychotic.

ANGER AND AGGRESSION

There appears to have been very little experimental work on anger as a phenomenon or on the regulation of anger. The literature on anger appears to be mainly related to psychodynamic formulations, work on the physiological components of emotional states and to experimental work on aggression where provocations that might result in anger are the paradigm for examining aggressive behavior and the factors which enhance aggression.

This scarcity of literature was pointed out by Novaco in 1975, and a scan of the literature since does not suggest that things have changed overmuch. In Novaco's work on anger control, anger or the experience of it is conceptualized in terms of three components - cognitions, physiological arousal and overt behavior.

Verres and Sobez (1980) reviewed the findings from research on the cognitive aspects of anger. They point out that anger does not, as a matter of course, arise involuntarily under conditions of stress but instead results from and is part of certain perceptual habits such as emphasis on negative perceptions, negative interpretative patterns and 'subjective ego-related events'. What is more, the arousal of anger can be directly influenced by self-instruction.

In studies of the effects of cognitive factors on aggression, extent of aggression has been found to be related to attribution of hostile intent (Epstein and Taylor, 1967; Zumkley, 1981), awareness of anger levels (Berkowitz et al., 1969; Crain, 1978) and to biased decision making (Dodge and Newman, 1981). In their study on biased decision making Dodge and Newman found that aggressive individuals showed a bias in attributing hostility even in unwarranted circumstances and that the bias resulted from speedy decision making with selective recall of social cues.

Work on the physiological components of anger arousal highlights the differentiation between anger and other emotional states in physiological terms (Schachter, 1957; Schwartz et al., 1981). Schwartz et al., for instance, comparing anger to other induced states such as fear, sadness and relaxation found that anger produced the greatest overall increases in cardiovascular measures (blood pressure and heart rate) and was distinct from other conditions under both state induction and recovery from exertion.

Cognitive processes and physiological arousal do not function independently. Erdmann and Janke (1978) reported evidence for the interaction between physiological arousal and situation-derived cognitions in the determination of emotional states that is proposed in S. Schachter's formulation. In another study Frodi (1978) asked provoked subjects to provide a 'stream of consciousness' report during a Buss-type experiment and found that subjects who displayed

the most aggression appeared to be preoccupied with aggressive thoughts thereby stimulating themselves to more aggression. This differentiation was closely paralled by changes in heart rate, blood pressure and skin resistance.

Difficulties arise in looking at the overt behavioral components of anger. Both at a cultural level and at research level anger and aggression are commonly linked. However there is no particular reason to assume that the relationship between the two is simple or clear cut. The possible behavioral concomitants of the experience of anger range from suppression of antagonistic responses, to response substitutions to verbal or physical attack. For instance, 'controlled' behavior does not equal anger regulation or lack of anger - people who overtly cope non-antagonistically with provocation may report angry thoughts and raised blood pressure. Aggression is only one of a range of possible responses to provocation.

Equally, aggression in itself is multifaceted or multifactorial. It does not necessarily follow that all acts of aggression are precipitated by angry thoughts. The literature on aggression indicates that a variety of factors function to enhance the probability of aggression - viz, shock-induced aggression (Ulrich and Azrin, 1962), frustration, schedule-induced aggression (Falk, 1971; Frederiksen and Peterson, 1977), history of reinforcement for aggressive behaviors, social modelled aggression (Bandura, 1973), weapons effects (Berkowitz and Le Page, 1967; Berkowitz and Frodi, 1977), drink/drug states and, last but not least, opportunity to aggress. Whilst many of these paradigms seem to have the common feature of negative events as precursors it is quite parsimonious to conceptualize them without reference to cognitive processes.

Toch's (1972) work with and classification of violent individuals on the other hand suggests that persons who are habitually violent or aggressive do have perceptual and cognitive habits which predispose them to aggressive behavior - "violence-prone connotations do not spring out of the incidents themselves but pre-exist in the shape of .... assumptions (which are) both personal and social .... (which) embody stable frames of reference". In a violent incident, if both individuals are violent their recurrent concerns compete; where only one is violent that person shapes the incident.

TREATMENT APPROACHES TO ANGER CONTROL

Prior to Novaco's (1975) developmental work on anger control there appears to have been very little work in this area. One of the fundamental problems in developing therapeutic treatment programmes for anger regulation is the amount of value judgement involved in therapeutically manipulating anger. As Averill (1978) points out, anger has both constructive and destructive (i.e. aggressive) as-

pects. The listings by Averill (1978), Hampton (1978) and Novaco (1975) of the functional significance of anger illustrate this. The functions of anger can be summarized as follows - that is, anger:

- energizes behavior (it increases the intensity of behavior)
- disrupts behavior (high arousal scrambles the attentional process)
- expresses (it provides for the expression of negative fellings)
- defends (it is a response to perceived threat)
- instigates (its experience and the concomittant emotions serve to instigate aggression through a learned association between anger and aggression)
- discriminates (it can be trained to serve as a cue to actions that cope with provocation and stress).

Work on therapeutic programmes for the control of anger falls into three main groups - the developmental work by Novaco (1975) and the subsequent application to various client groups, a similar approach by Siebert (1977) based on Schachter's theory of emotion, and the work on stress innoculation, initially developed for problems of anxiety and pain but subsequently applied to anger problems.

Novaco drew from three strands in the research literature for his anger control procedures: the studies of the effects of cognitive factors on aggression, the work of Meichenbaum (1972) on self-instruction procedures and Ellis' (1973) work on Rational-Emotive Therapy. His treatment package was based on a set of hypothetical principles in the form of propositions for anger management - with the emphasis on the notion of personal competence in managing provocations. Translated loosely, the propositions basically say that the following are associated with an increased probability of anger regulation:

- maintaining a task orientation in a provocation situation
- high self esteem
- repertoire of non-antagonistic coping behaviors
- awareness of one's arousal
- using arousal as a cue to non-antagonistic coping
- perceptions of being in control of a situation
- dissecting provocation into stages and self-instructing
- self reward for successful coping
- relaxation skills for controlling tension/arousal

The actual procedures of the treatment package consisted of training in cognitive control skills (such as examining self-statements and using appropriate self-instructions) and relaxation skills, followed by practice of these skills in graded situations during therapy.

The clinical trials comparing the combination treatment with individual components and no-treatment indicated that the combination was superior in outcome. The trial was carried out with volunteers

from university students and staff, and local community residents who self-referred for anger problems. Since Novaco's work in 1975, the anger control approach has been used with criminal offenders (Petrella, 1978), spouse abusers (Margolin, 1979), aggressive children (Hochman et al., 1981) and with offenders detained in a Special Hospital (Alves and Bonham, 1981).

Quite separately from Novaco, Siebert (1977) developed what appears to be a similar treatment package and reported on outcome data with student volunteers.

A related line of work was developed under the name of stress innoculation training. It was initially developed by Meichenbaum et al., (1974) and successfully applied to anxiety reactions and to the tolerance of pain. Novaco (1975) suggested that the procedures could be easily extended to training in the tolerance of anger stimuli and effectively utilized for anger problems.

Meichenbaum's procedures consisted of three phases: first an educational phase where the client is provided with the conceptual framwork, then a rehearsal phase which enables him to become familiar with cognitive and behavioral coping skills and finally, an application phase where the coping skills are practised under exposure to a variety of stressors. The procedures have since been successfully applied to training in anger control and provocation management with juvenile deliquents (Schlichter and Horan, 1981), disturbed children (Spirito et al., 1981) and police officers (Novaco, 1977; Sarason et al., 1979).

The approaches outlined above have a number of features in common. First, they are more appropriately conceptualized as training rather than treatment procedures. They all have a specific educational component. All approaches involve outlining the conceptual framework and basic principles to clients. Clients are then given training in the particular procedures and given guided practice in the use of the skills through role plays or exposure to real life situations.

The second feature in common is the emphasis on the cognitive component. Cognitive restructuring is aimed at correcting irrational belief systems that lead to anger by bringing internal sentences to an explicit level and challenging their correctness. The self-statements that precede, accompany and follow events are replaced by more appropriate self-statements that direct the individual to attend to the task dimensions of provocations and regulate the arousal state. In a sense, self-instructions are used to interrupt the 'impulse' move and as a substitute action for attack.

The third feature in common is the emphasis on competence in managing provocations. Novaco (1975) declared that "In terms of

treatment goals, constructive coping behaviors are the most central measure since they reflect the person's competence for dealing with provocation in an adaptive fashion". His subjects reported that the most important aspect of treatment for them was the idea of staying task-oriented when faced with a provocation. Perceiving incidents as personal affronts seems to be a very automatic response and there are individuals who say that they enjoy becoming angry. Therefore, defining a situation as a problem which requires solution defuses the threat which calls for attack and helps avoidance of responses which result in escalation of provocation. The emphasis on competence rather than suppression-like control is probably extremely important for individuals who do not wish to give up their assertiveness.

However, though the treatment studies emphasize the notion of competence in managing provocations, they do not, in the main, explicitly examine the overt interpersonal skills required for handling provocations. Competence is usually defined in terms of cognitive control skills. Interpersonal skills are simply referred to as non-antagonistic responses without clear specification of their components. The one study which was more explicit about interpersonal skills was that carried out by Rahaim et al., (1980) on the effects of social skills training on the behavioral and cognitive components of anger management. Training or intervention should ensure that clients are equipped with a sufficiently wide repertoire of behavioral as well as cognitive alternatives to the use of physical force for the control of antagonism. One suspects that cognitive procedures such as self-instruction would soon be abandoned by clients if the procedures are not accompanied by successful behavior and outcome.

ISSUES IN THE USE OF ANGER MANAGEMENT PROCEDURES WITH 'MENTALLY ABNORMAL' OFFENDERS

Extending anger control as a treatment option to aggressive individuals has a face validity because of the apparent relationship between anger and aggression. As noted earlier, however, aggression is multifaceted and it cannot be generally assumed that aggressive individuals would benefit from training in anger control. Individual cases should be assessed to establish whether anger control has functional relevance to their history of aggression. In the case of 'mentally abnormal' offenders with a history of aggression, the high degree of active client co-operation and motivation required by the nature of the treatment approach and assessment procedures place limits on which patients would be accessible for treatment.

There are difficulties in formulating treatment objectives because of the degree of value judgement involved in the decision to treat. Although clients may well report the (recurrent) experience of anger to be distressing the aim of anger management is not

suppression-like control. Anger has constructive as well as destructive effects. For instance, the expressive function of anger may well be regarded positively. Indeed in assertiveness training the expression of negative feelings is commonly a training objective. On the other hand, functions like the disruptive effect of anger arousal on attentional processes and the instigation to aggression would normally be regarded as negative aspects of anger. Whether anger is appropriate and desirable therefore depends on situations and consequences. Treatment targets may well have to be situation-specific. The discrimination which needs to be anticipated in targeting depends upon the availability of accurate functional information on the range of situations which clients perceive to be provocative.

In general terms, the main objective of intervention in this area is competence in managing provocations. With patients whose aggressive behavior is linked to anger arousal, the objective is not only to increase the probability of constructive coping in provocation situations but also ultimately to decrease the probability of anger-related aggression.

Treatment goals may be differentiated in terms of short and long term depending on whether the client is community based or detained in an institution. For individuals who are habitually aggressive and whose behavioral problems are manifest irrespective of setting the short term goal of reducing the frequency of aggressive incidents in the immediate setting is obvious. If the immediate setting is community based this short term goal is 'natural'. However, where the client is institution based, aggression may well be an artifact of institutional characteristics. In any event there is little basis for assuming that there will be generalization to other settings (i.e. the community). More common with respect to 'mentally abnormal' offenders are individuals who exhibit a relatively low frequency of aggression, particularly when detained, but whose aggression when not contained is serious. If the client's current frequency of aggression is low, how does one formulate meaningful short term and long term goals for anger management? Or does one teach anger management skills in the hope that this will have a pre-emptive effect sometime in the future?

The evaluation of outcome is a major issue. The outcome measures commonly employed in the treatment research discussed in the preceding section of this paper include general anger scales, event diaries of real life situations and self-report, physiological and behavioral data from imaginary and role-played provocations. With aggressive patients for whom the objectives are increasing the probability of constructive coping and decreasing the probability of aggression the ideal data base would be:

- frequency data on aggressive incidents
- objective data on response styles to provocation
- data on the client's perceptions/cognitions for a range of pro-

vocations (hence the use of inventories, self-ratings of feelings of provocation and response probabilities, diaries).

In other words the assessment should generate information of frequency and the extent of anger-related aggression plus information on the repertoire of coping skills and cognitive aspects.

The difficulty of obtaining frequency data on offender patients has already been referred to. Aggression is, in most cases, essentially a low frequency event when considered in terms of man hours. Estimates of frequencies of aggressive behavior in the community may only be available via records of convictions and known instances - a notoriously weak source of data. Even with known instances the client may be unable to articulate an explanatory account of their aggressive behavior other than some hazy notion of feelings of anger, so that one is not sure in which instances anger had functional relevance. If the client is detained in an institutional setting such as a hospital the actual incidence of aggressive behavior is often of low frequency, due in the main to institutional constraints. A data base with these sorts of weaknesses means that it will be exceedingly difficult to assess any change in the probability of aggressive behavior.

One individual whom we saw for individual therapy (Alves and Bonham, 1981) had, whilst in the community, attacked persons and property during recurrent fits of temper, finally killing a child during one of these bouts. He also reported that since admission to hospital he had experienced high anger arousal in a range of situations. Yet an examination of recorded incidents revealed that during his six years of detention in hospital he had been overtly antagonistic on six occasions, only one of which was expressed in a physical attack, albeit on his own property.

Objective data on cognitive aspects is by definition impossible. The experience of anger is a private event. However, the heavy emphasis of anger control procedures on cognitive aspects means that some assessment in this area is necessary. Cognitive data is self-report based whether in inventory form or in ratings of events. In theory, self-report formats such as inventories, ratings of laboratory provocations and diaries are useful for identifying the types of situations linked with anger arousal and degree of provocation. But whilst ratings of provocations in the laboratory and real life are specific to individual clients, anger inventories are general purpose. One suspects that the situations listed in general purpose inventories need to be tailored to those of which the client has direct experience.

Biaggio et al., (1981) reviewed the measures commonly employed in assessing outcome of training in anger management. They looked at the test-retest reliability of four anger scales - the Buss-Durkee

Hostility Inventory, the Reaction Inventory, the Anger Self Report and Novaco's Anger Inventory - and at their predictive relationships with event diaries and self-report and physiological measures from imaginary and laboratory role-played provocations. Whilst two measures (the Buss-Durkee and the Reaction Inventory) evidenced good test-retest reliability, none of the four anger scales, apart from some subscales of the Anger Self Report, showed good ability to predict on the criterion measures. In other words, they did not appear to measure specific states or behavior. Not only do the results suggest that little reliance should be placed on self-report in connection with actual behavior but also that self-report formats purporting to measure the same thing have little relationship to each other. With the reliability and validity of self-report so suspect, there appear to be few useful options for assessing the cognitive aspects of anger problems.

At a more pragmatic level other factors constrain work on anger control with offender psychiatric patients, particularly if they are detained in institutional settings. Whilst the literature asserts the usefulness of the role plays in assessment and training procedures, institutional constraints often mean that it is impolitic to subject clients, especially before treatment, to role-play provocations. Also, institutions are often geared to pre-empting provocation situations so that clients have limited 'real' chances to practice appropriate coping skills.

SUMMARY

Studies on the use of anger control procedures have reported successful outcome with a variety of client groups. The application of such procedures to 'mentally abnormal' aggressive offenders with anger management problems has a face validity. However, complex issues arise as a result of the problems of defining anger and its relationship to aggression and from the more practical concerns of the assessment and intervention procedures.

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ISSUES IN COMMUNITY PSYCHOLOGY

ISSUES IN COMMUNITY PSYCHOLOGY:

AN INTRODUCTION

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COMMUNITY PSYCHOLOGY: A CHALLENGE FOR THE PRACTITIONER

The concept of 'community psychology' is an especially fraught notion which highlights some of the most crucial issues in the practice of clinical psychology and touches upon equally fundamental questions relating to health care in general. Confusion surrounds the concept in that there are two distinct connotations. The first, and more straightforward interpretation of the term community psychology, and one which is arguably erroneous, refers to the transfer or deployment of clinical psychological resources into a community setting from the more traditional location within a large psychiatric hospital or department of psychiatry within a general hospital. The obvious focus in the community has been the primary care health team and the movement into this field has certainly been popular amongst clinical psychologists over the last decade or so. Broadhurst (1977) and Davidson (1977) are two examples. The shift towards a primary care setting has not been without criticism and perhaps the most comprehensive attack comes from McPherson (1981) who raises the question of whether this movement represents 'development or diversion'. The prevalence of psychological morbidity in the community is not in doubt. Indeed some epidemiological investigations suggest a very high rate. McPherson cites Shepherd et al. (1966) as showing an overall rate of psychological morbidity of 14% in the population, with psychological disorders representing the second most common cause of consultations with a general practitioner by females and the fourth most common for males. About 8% of the population receive prescriptions for benzodiazepine medication, at a staggering cost to the Health Service. The argument is rather one of the appropriate 'modus operandi' for psychologists to adopt in an attempt to begin to meet this vast within the community. McPherson reflects upon the

experience within the United States of transfer of clinical psychology resources into the community during the 1960's and interprets the findings as a good model of what should be avoided in the United Kingdom. The description 'Innovation without change' is applied, citing Rappaport (1977). The main theme is that the traditional dyadic model of intervention, based upon therapist-client consultation or even the multi-client groupwork approach, cannot hope to meet the needs of those suffering psychological morbibity in the community. In a sense this reflects the very small number of clinical psychologists employed in the United Kingdom, probably not greatly in excess of one thousand, but bearing in mind the American experience it is questionable whether the dyadic model is valid even given very much larger numbers of practitioners.

As early as 1971, Hawks was raising the question of whether the clinical psychologist could afford to treat the individual and he has amplified this recently (Hawks, 1981): 'the solution cannot be the employment of an ever increasing proportion of the population in the provision of services to the remainder,'and 'clinical psychologists have diverted themselves with further involvement in the intricacies of an ever increasing repertoire of therapies'. Hawks asserts that even where the client is fortunate enough to secure a series of consulations, the psychologist is perhaps rather deluded to imagine that the impact of the therapeutic hour can even begin to outweigh the malevolent effects of a hostile social-political and economic-environmental milieu. Similar arguments are proposed by Scheff (1975) who coins the term 'psychological fallacy' to denote the mistaken and either grandiose or naive assumption that the clinician can intervene with any potency in direct interaction with the individual client.

This is the core of the wider meaning of the term 'community psychology', namely the radical notion that a psychologist ought to be primarily concerned with the social antecedents of psychological morbidity and intervene by acting upon these adverse institutional factors in a preventative fashion. Research evidence such as that provided by Brown and Harris (1978) concerning the social origins of depression certainly expose possible adverse mechanisms within the community and raise the difficult and challenging question of what a psychologist can be expected to do about such situations. Sutton (1981) has highlighted some of the conflicts which can follow when an employee of the 'establishment' attempts, in the interest of the client, to intervene as their advocate in order to modify the effects of social institutions. The context taken by Sutton is that of the educational psychologist within the social institution of the school system, but it is easier to see how parallels could emerge in other branches of applied psychology such as the clinical field. On examination, the legalities of the position of the educational psychologist seem to be that the practitioner, in this case, owes their allegiance to the employing authority rather than the client and is

therefore not free to campaign against flaws in the school service. Interestingly these strictures seem less applicable for psychologists in comparable roles in the United States. Even more significantly, it seems that the medical practitioner in the United Kingdom is not nearly so constrained from voicing criticisms against social systems which cause physical ill-health, since it is clearly acknowledged that their duty to the patient is paramount, The difference is surely one of the perceived standing and authority of the professional concerned, which itself relates to their statutory role and all that this implies in terms of the history of the profession and the extent to which it is integrated into the social fabric. This is clearly a key difference between, say, psychology and medicine, and will recur in this discussion.

On a different aspect of the relations between professions which needs to be taken into account when considering the nature of community psychology in the radical sense, it is necessary to understand that the emphasis in preventative measures has its precedents again in physical medicine. Authors such a Illich (1977) have emphasized that the major improvements in the health of the community have always come from changes in environment as a consequence of reforms in social policy. The impact of therapeutics, despite the massive imbalance in the distribution of resources in its favor as against preventions, has been slight, if measurable at all. Feldman (1981) points out that few attempts have been made by psychologists to act on the community in a preventative mode, although these efforts have been interesting and indicated some potentially fruitful lines of advance.

However, psychologists have perhaps begun to examine the effects of more immediate social systems, not surprisingly perhaps, the institutions within which most applied psychologists are themselves employed, namely the hospital and the school. McPherson is perhaps the most active advocate of the 'systems approach' in the clinical setting (for example Butcher and McPherson, 1982). In the educational field Burden (1981) exemplifies the organizational approach. Butcher and McPherson reiterate that a useful body of knowledge already exists in the form of organizational psychology, lamentably little known to those in the other major branches of applied psychology, and cite Bass and Ryterband (1979) as a helpful introduction. A key point is that an organization may act as a 'recalcitrant tool' with 'a life of its own' superordinate to its ostensible function of, for example, helping its clients. Butcher and McPherson highlight the 'incompatibility between professional and organizational goals, between professional and bureaucratic administration' and the reliance of professionals upon 'expert power' in influencing others. These authors hint that understanding the bureaucratic order within which the psychologist works might result in rather disappointing enlightenment when they say that 'nor is it the case that different types of professional have equal status in an organization'.

The question arises as to whether a psychologist ought to seek to become part of the bureaucracy itself or, at least, to take on traditional hierarchical structures in its own internal organization, or to remain 'on the outside'. This is a difficult debate and has focused more on the benefits which would accrue to the psychologist rather than to the client in pursuing professional versus managerial status, at least for clinical psychology (Dabbs, 1982). However, this controversy is perhaps worth touching upon because it could be argued that the limitations upon the personal advancement of psychologists ultimately reflect the same themes as the restrictions on effectiveness.

Dabbs (1982) bemoans the 'apparent propensity towards the deprofessionalization of clinical psychology' reflected in the new grading structures. This position could be countered to some extent by the argument that the new structure merely represents the previous arrangements made more explicit. Also it has been said that if clinical psychology did not embrace a management structure of its own it might well be managed by others. The fundamental issue is again one of statutory role and perceived standing. The 'deprofessionalization' view presents the disadvantageous position of the psychologist in relation to their medical colleague as rather self-inflicted, but surely a comparable status cannot be conferred on the profession on request. Whether psychologists can gain the level of institutional integrity of medicine, or should seek to do so remains a matter of debate but the relative lack of such status currently does seem relevant to the quest to intervene directly via the community on behalf of the client or potential client.

A further related issue arising from the question of efficacy is job satisfaction. Newly qualified applied psychologists still seem likely to experience 'culture shock' on moving from an academic milieu which emphasises the intricacies of a dyadic model of intervention into the 'real world' of an organization or institution. This can result in great disillusionment when direct casework initiatives are undermined by the countertherapautic effects of the organization, or advice given to colleagues in other disciplines does not seem to be heeded or, if implemented, seems to wither in the face of relentless institutional regimes.

In the clinical field a great deal of research effort has recently been devoted to the detrimental effects of residential care, especially long term institutional care, and this has led to the formation of an increasingly vocal movement, especially relating to the elderly, mentally handicapped and mentally ill populations. Such initiatives have reached to the central policy-making level as witness documents such as 'Care in the Community', (DHSS, 1981) although the emphasis has perhaps been the avoidance of long term hospital care where possible rather than ways of modifying the organizational factors which harm the inevitable long term residents. With regard

to the latter group there is, however, a growing body of evidence which helps to clarify the mechanisms whereby residential care establishments can have depersonalising, deskilling and dependency-making effects. Davies (1982) exemplifies some of these issues in relation to elderly populations. Part of the information required in order to substitute an 'enabling' environment for one which is psychologically destructive must refer to the determinants of existing typical staff behaviors, since these often seem very much more resilient than those which clinical psychologists would wish to institute. Psychologists have been required to examine critically the traditional methods which they, and others, have most frequently used in an attempt to make staff behavior more therapeutically effective. It has been suggested that the actual effects of intensive and costly training programs may be minimal when measured in terms of enduring staff behavior changes such as result in detectable benefits for residents (Ivancic et al., 1981).

In the field of education, psychologists are especially beginning to take account of organizational principles and Burden seems to be a major advocate of the systems approach to schools. Burden (1978) is cited by Douglas (1982) who also captures the predicament of the newly qualified, hopeful behavior modifier thus: "I only wish I had read....' 17 guidelines to consultant survival in the school system' - before I had started," referring to the work of Allen et al. (1976) in the United States. Douglas' assertion that 'certain schools scapegoat children and that as one difficult child is removed the next one surfaces' dramatically emphasises how disparate the intrinsic and ostensible functions of an organization can be, and captures the 'shock effect' for the unprepared new practitioner. The title of the paper by Georgiades and Phillimore (1975) also contains an evocative reference to the fare of the psychologist attempting to intervene in the organizational setting, that is, 'The myth of the Hero Innovator'.

Despite the validity of the formal systems analyses of school and other organizations, when it comes to actual guidelines for successful-intervention within the system, the practitioner still seems to be left in a position of relying on informal means. Having determined who yields effective influence within the system the psychologist then simply, or perhaps not so simply, has to 'influence the influential', or as Georgiades and Phillimore put it, 'cultivate the host culture'. It is certainly vital to recognize that the behavior of the organizational system is not necessarily what would be suggested by the manifest hierarchy, but this is perhaps widely appreciated already in informal terms. The feeling remains that the psychologist is almost required to infiltrate the organization and subvert it in order to coax it along the path to discharging the humane function for which it was set up in the first instance. Are such informal methods a poor substitute for a situation in which psychological advice would be taken as a statutory requirement or

would the prerequisite absorption of the psychological workforce into the establishment result in the same bureaucratic evils becoming as prevalent within psychology as without?

The limitations on the effectiveness of the psychologist working within the organization are not merely those of a relative outsider attempting to convince the 'front line' workers to abandon malevolent habitual practices and adopt more productive methods. Even in situations where, say, the medical practitioner is an infrequent visitor to a ward, they are perhaps likely to create more impact and expect more consideration to be given to innovative suggestions. Even here, however, the skepticism afforded to the 'unrealistic' aims of the 'expert' from outside who does not have to take account of everyday practicalities no doubt comes into play. However, if one is both an infrequent visitor and one lacking in statutory, as in the case of the clinical psychologist,matters can be very difficult indeed. One might, of course, 'borrow' a degree of legitimate authority from the medical practitioner with their sponsorship but to achieve this the stage of being perceived as ancillary to, say, the psychiatrist might need to have been clearly passed. Thus, not even the role of the 'expert outsider' might be available and the membership of a self-managed hierarchy might well be justified as making for greater effectiveness than the role of the psychiatric ancillary.

The situation is, of course, different from that of the educational psychologist, where the transition for the ancillary role to that of autonomous professional has been achieved with the demise of the Child Guidance Team and the emergence of the Schools' Psychological Service. Interestingly, this has coincided with the establishment of statutory role for educational psychology in the determination of a case of special educational need and the recommendation of special education placements. While authors such as Butcher and McPherson (1983) urge psychologists to draw upon the knowledge base of organizational psychology in order to understand the workings of the institutions within which they are employed, as a means of improving the efficacy of their interventions, the trend towards community psychology, in the narrow sense, perhaps represents a more popular movement in response to the same problems, that is, of escape from institutional settings. McPherson (1981) describes the export by clinical psychologists into primary care of traditional dyadic models of intervention in terms of a 'theoretical, organizational and resources vacuum', and lists many arguments for caution. McPherson questions whether the relevant 'market research' has been conducted to determine the level of demand by general practitioners and suggests that the successful projects reported may reflect a self-selection factor applying to certain interested general practitioners who are not at all representative. Thus, he says, the autonomy in relation to general medical practitioners achieved by a few clinical psychologists may not be indicative of the general case in view of the fact that health centers are 'organizationally complex'.

Autonomy is surely the crucial concept and reflects the desire of clinical psychologists to escape from the anomalies of a role still not quite free from overtones arising from the old psychiatric ancillary model. This is underlined by McPherson's point that, although there is evidence that general practitioners indeed wish to refer directly to clinical psychologists without going via psychiatry, the attendance of the psychologist at the surgery or health center might be the option least popular amongst general practitioners. However, it does seem necessary to separate two distinct components within the transfer to primary care settings which account for its popularity. Firstly, it is plausible that clinical psychologists, emerging from the very immediate and pervasive organizational structure of the hospital into the primary care setting, might be misled by the less obvious 'organizational complexity of the health center' into believing that they have achieved autonomy in relation to the general practitioner. The fact that health center clients are resident in their own homes and that members of the primary care team spend much of their time visiting the client clearly makes for great organizational differences from the hospital situation. Many of the countertherapeutic aspects of hospital settings arise from the need, real or apparent, to manage and cater for numbers of clients centrally located. In the community, the dispersal of the clients naturally results in a more open organization of health care workers. Whether this represents truly greater autonomy from the co-ordinating medical officer or merely a less visible system of constraints remains to be seen.

However, there is surely a second factor which contributes to the appeal of the primary care setting for clinical psychologists which seems less likely to turn out to be illusory. This relates to the issue of demarcation. Not all the problems of the psychologist within the hospital service relate to pervasive organizational constraints surrounding the question of medical responsibility in general. A clinical psychologist might expect to have a less fraught relationship with a general practitioner because, although the general practitioner retains medical responsibility, there is much less likelihood of a conflict of demarcation concerning the appropriate aspects of a client's needs which ought to be dealt with be the psychologist and general practitioner respectively.

This is markedly different from the psychiatrist/psychologist relationship in which it is perhaps unlikely that all psychological aspects of the case will generally be delegated to the clinical psychologist, although this may occur sometimes. It is much easier to divide a caseload into the medical versus the psychological than to establish a discrimination between them the medical, psychiatric and the psychological which will satisfy the clinical psychologist. Psychiatrists are perhaps reluctant to limit themselves to the purely organic aspects and while they may wish to involve a psychologist in the management of the non-organic side of a case, to delegate the

whole of this field would presumably create a feeling of poverty of content for psychiatry. While the same might apply to some general practitioners, it seems that, in general, the impression of much happier division of labour between psychology and medicine as possible in the primary care setting probably has firmer foundation.

Investigation of the organizational context of psychological practice may be a worthwhile activity in an attempt to change the efficacy of intervention but, as mentioned previously, the focus of study to date has remained largely the more immediate organizations of health care or educational institutions. Little study of the wider social, economic and political institutions in relation to psychological morbidity has been carried out, although there are exceptions, e.g. Brown and Harris (1978). More research is required, arguably taking into account the existing findings and approaches of social medicine and epidemiology. The question remains as to how psychologists may incorporate some appreciation of the effects of the wider social factors into their interventions so that they are not merely treating the 'casualties' but truly undertaking community psychology. Interestingly, Hawkes (1981) proposes a model which he names 'corporate practice' where a whole group of clinical psychologists would spend a limited period working on a particular project which reflected a pressing need in the community, and then move on to another 'priority' area. This would be irrespective of historical attachments to multidisciplinary teams and Trethowan-type specialist sections, although presumably some such links might be maintained in parallel. In view of the extended discussion on the need to understand the organizational context of psychological practice, this suggestion seems rather iconoclastic. No doubt some clinical psychology departments have reached a stage where this would not be seen as excessively confrontational, but many departments could not yet entertain such a radical solution because of traditional attachments to particular units of psychiatry, for example.

Despite the emphasis upon the 'systems approach' and organizational relationships, it has never been the aim to refute the notion of individual forcefulness in influencing the social and institutional policy makers. Complementary to his idea of the 'psychological fallacy' Scheff (1975) also proposes the 'sociological fallacy' that systems alone produce social outcomes, citing the familiar example of cycles of political revolution which fail to produce real change because of the 'disruptiveness of the old personality patterns on the new institutions'. Butcher and McPherson (1982) refer to 'referent power, that is, the impact of individual style'. Thus individuals will continue to exert influence, irrespective of professional or organizational role, and it is to be hoped that psychology will have its share of such personalities who will help to modify social systems in the direction of the prevention of psychological morbidity. However, personal charisma is perhaps not a preferred approach because it does not lend itself itself easily to

the kind of operational definition which would render it generally applicable!

Another approach is perhaps to recognize that within the prescribed parameters of the social system there are margins which are not strictly determined and where there is scope for psychologists to mobilize previously dormant benign agents to counter the malevolent effects of social policy. The self-help group is perhaps the most obvious example of this, where the psychologists knowledge of group dynamics could be used catalytically to facilitate cohesion in groups which would then offer support to its members. In a sense, this would represent the reinstitution of previous 'natural' community groups destroyed by adverse housing policies, social mobility effects, etc. Since the need for such antedotes to contemporary social forces destructive to community support networks is already generally recognized, the involvement of psychologists seems a natural evolutionary development. Such ventures are already in existence and seem to represent an attractive return on minimal psychological manpower investment. Also, in this context, since there tends to be an understandable resistance to a high profile professional input by lay workers, the relative absence of a statutory role might actually enhance the potential contribution by psychologists. This seems to be the reverse of the situation in the final example to be offered, one mentioned by Feldman (1981): involvement in mass media campaigns. Since the involvement of the relatively influential medical profession has been far short of a guarantee of success for campaigns against social policies detrimental to physical health, it could be speculated that the weight of psychological opinion expressed through the media might be less than impressive in its effects. The establishment is presumably most responsive to the lobbying of the most established of professions which, it would be argued, are rather less likely to engage in the kind of such activities which would impinge upon psychological morbidity within the community. Yet psychologists themselves have yet to achieve the perceived standing which would lend power to their collective voice.

Ironically it might be said that one of the social policies detrimental to psychological health in the community is one which restricts spending in areas where it might otherwise result in the numbers of psychologists being increased. Conversely, without sufficient numbers it is difficult to achieve the statutory role and public credibility which would give impetus to the kinds of endeavors we have considered under the heading of community psychology. Kat (1980) showed an exponential 8% rate in the number of clinical psychologists over a limited interval, which lamentably will almost certainly not have continued at anything like such a pace more recently. Notwithstanding Hawks' (1981) dislike of the notion of ever-increasing numbers of helping professionals attempting to care for a decreasing proportion of the to-be-helped in the population, it

does seem that the number of professional psychologists falls short of the 'critical mass' which would produce a potent result in terms of the community psychological mechanisms we have discussed. Does an understanding of the 'organizational context' stretch to an insight into the mechanism of the genesis of quantities of professional psychologists?

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THE SYSTEMS APPROACH TO EDUCATIONAL PSYCHOLOGY: A CASE HISTORY AND SOME POSSIBLE IMPLICATIONS FOR THE CLINICAL PSYCHOLOGIST

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The practice of educational psychology in England and Wales has undergone marked changes in the last decade. The publication in 1978 of a book of reading with the somewhat grandiose title of "Reconstructing Educational Psychology" served as a catalyst for many who had been seeking to break out of the chains imposed by the individual-centered psychometric model that has prevailed for the previous half century. One chapter within that volume (Burden, 1978) sought to draw together ideas from organizational psychology, namely systems theory, and to apply these to problems posed by schools.

The interest generated by the systems approach to schools led to further publications providing a step-by-step guide to schools systems analysis (Burden, 1981) and illustrating some of the semantic complexities associated with the term 'systems theory' (Burden, 1982).

The application of a systems approach must stem from certain assumptions about the nature of applied psychology. (1) The initial premise taken here is that educational psychologists should be problem solvers who seek to apply the theories and techniques of psychology within an educational setting. (2) Problems rarely, if ever, occur in isolation and the most appropriate setting for solving them is where they occur, not in an office or clinic removed from the real-life situation. (3) In order to work successfully in this way it is necessary to have an understanding of the context within which the problems occur. (4) By viewing schools or families as complex open-ended systems we can bring about such an understanding.

Thus the focus of the approach can be seen as problems-centered, the model as interactionist and the context as the community. There

seems no good reason why this should not apply as much to clinical psychology as to educational.

Working from the premise then that most of the work of educational psychologists should take place in schools and families, it follows that they must seek to understand how schools and families work. Although this paper will be mainly concerned with one way of examining schools as systems, there is, of course, a great deal of work applying similar approaches to understanding family dynamics (e.g. Minuchin, 1974).

In order to work in this way it is helpful to have a set of models, or theory, about why people and systems behave in a certain way, how problems can and do arise and how change might be brought about. A set of models which have been found to be particularly helpful in this context have been developed in the United States under the heading of Organizational Development (OD) in Schools (Schmuck and Miles, 1971; Schmuck et al., 1977).

Beginning with the simple linear model of a school as an open system in the business of transformation (Kast and Rosenzweig, 1970) i.e. Input (children, information) → Transformation system → Output (educated young adults), the Transformation system can be broken down into a number of substems:

(a) Goals and values i.e. the nature of the school curriculum.
(b) Technology i.e. the methods used to facilitate learning.
(c) Structure i.e. the departmental and pastoral organization.
(d) Psychosocial i.e. social relationships, ethos.
(e) Management i.e. leadership, overall organization of human and material resources.

We can add to this four basic postulates suggested by Lake and Callahan (1971):

1. Schools are organized into subsystems by means of communication, decision-making, job allocation and program evaluation.
2. Schools are goal-directed. The subsystems should be organized to achieve the overall goals. (But note that goals within a school are often in conflict, thereby leading to subsystem hierarchy.)
3. Schools display some degrees of openness and adaptability. They are always changing even though this may not be readily apparent.
4. Schools have many resources that are not being used at any one time. (This is sometimes referred to as a variety pool).

Schmuck and Miles (1971) were able to draw together these and other ideas in the construction of their dimensional model, referred to as an OD Cube. Within this model, emphasis can be placed upon the

diagnosis of problems (e.g. communication, leadership, decision-making etc.), modes of intervention (e.g. data feedback, process consultation, confrontation) and any particular forms of attention (e.g. individuals roles, team groups, etc.).

This particular approach was the one taken when a request was made by the Remedial Department of Twyford School, a large Comprehensive (1250 pupils) in the West of England, for help in sorting out their problems in educating their slower learners. After a series of discussions with the headmaster and key members of staff, it was agreed that a systems project should be set up involving a team of trainee educational psychologist from the Exeter University M.Ed. (Ed.Psych) Training Course under the leadership of the author and all interested members of the school staff. The agreed format of the project was that the systems team should work in the school and contributing Middle schools every Tuesday for two terms, and that there would be a fortnightly meeting between four and five p.m. for the purposed of feedback and discussion to which all interested members of staff were invited.

A full report of this project has been prepared and is available on request from the author. Rather then providing a reproduction of this report at this juncture,specific points will be made about the preparation, implementation and completion of the project.

PREPARATION

Two main points need to be made here. Firstly, a great deal of effort was put into what Georgides and Phillimore (1975) term "preparing the host culture". Basically what is meant by this is the establishment of trust and credibility within the school with regard to the project and the systems team. Secondly, a major feature of the success of this kind of work has been found to be the establishment of a written contract agreed upon all participants prior to the commencement of the project (see Burden, 1978; 1981).

IMPLEMENTATION

Formal Systems Theory would argue for a clear-cut division between the systems analysis and systems design stages. In practice it is usually far more difficult to separate the two. A brief description will be given here of action taken throughout the project with the warning that the sequence as set out here should not be regarded as linear. The actual process is always considerably more "messy".

In the process of systems analysis the project team carried out the following lines of enquiry:-

(a) Looked at information available to pupils, their families and community about the school.
(b) Looked at information available within the school on pupils i.e. incoming information, record keeping, monitoring progress, report system, punishment book.
(c) Talked to teachers informally, then asked them to complete questionnaires about syllabus, the curriculum as a whole and their attitudes towards slow learners.
(d) Talked to pupils informally and later in a more structured way about their feelings about school and their place within it. Assessed their attainments on a variety of measures.
(e) Observed classroom teaching, pupil learning and teacher-pupil interactions.
(f) Examined communication systems: staff-staff, staff-pupil, school-home.
(g) Examined physical layout: damage, graffitti, etc.

In attempting to plan and bring about change, different but complementary methods were employed:

(a) Regular weekly discussion meetings were held regarding the ethos of the school, its goals etc. and provided feedback on the team's findings in an ongoing way.
(b) Introduced discussion papers describing ideas or interesting work being carried out elsewhere.
(c) Planned organizational change, encouraged open expression of ideas, supported positive innovators and generally sought to establish "moles" within the system.
(d) Held an In-Service Training day at which information was provided to all subject specialists on ways of teaching slow learners in their subject.
(e) Provided a final written report on project outcomes for every member of staff.
(f) Offered continuing back-up and support to interested staff over the following year.

CONCLUSIONS

A diagram of the organizational structure of the school has proved useful in highlighting the points at which obstacles to the success of the project occurred. All were explicable within the original Schmuck and Miles OD model, which proved particularly helpful in demonstrating also the weaknesses in the methods employed by the project team. A good example of the latter was that at a human level the introduction of more clinical psychotherapeutic help for certain key members of the management structure could have proved invaluable in overcoming one or two major stumbling blocks.

Change was brought about within the school but not without considerable cost in terms of manpower, resources and psychological

commitment. The need for some form of continuing cost-benefits analysis of any such project must be emphasized. Moreover, it has subsequently become clear that unless some form of maintenance schedule is built into the process of systems change, there is a danger that much of the hard-won positive gain will be lost.

The approach that has been described here can be summarized as a problem centered interactionist model with a community-based focus. The actual techniques employed are merely a logical extension of this. As such there seems no reason to believe that they would not prove just as effective when applied to contexts such as hospitals or prisons that from the more usual settings for the work of clinical psychologists. Certainly, the systems approach can be viewed as more truly representative of applied psychology than some other that have laid claim to that title.

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SETTING UP A COMMUNITY ALCOHOL SERVICE:

AN EXAMPLE OF COMMUNITY PSYCHOLOGY

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I want to describe the recent setting up of community alcohol team in Exeter and to consider this in the light of things that have been said and written about the community psychology movement. In doing this I hope to explore the nature of community psychology and to ask whether the Exeter development is or is not good example of it.

The Exeter CAT (Community Alcohol Team) is a mix of professional and non-professional workers from various backgrounds and disciplines, and indeed employing authorities, who seek to provide an integrated service for people with drinking problems in Exeter and surrounding areas, and who use a particular in the town as their center or headquarters. Members of the team number over twenty, but most are part-time, some of them able to give merely one evening or one day-time session a week. These part-timers include volunteer counsellors, a probation officer, a psychiatrist, an occupational therapist, two social workers, and two clinical psychologists, one of whom gives three sessions, the other one. The core of the team consists of the full-timers - three community psychiatric nurses and four employees of the voluntary organization, the Devon Council on Alcoholism.

The team formally came into being a year ago, at the beginning of October 1981, and at the same time the in-patient A.T.U. (Alcoholism Treatment Unit) in the local psychiatric hospital closed. Although this closure took place for a variety of very practical reasons, including the desire of the Health Authority to save an amount of revenue that has turned out to be in the region of £20,000 a year, the closure of the unit in an institution in favor of one "in the community" is certainly consistent with one of the main strands

in thinking in community psychology. The center that has taken its place is a three-storey building, a quarter of a mile from the town center, on the edge of a former general hospital site now used largely for administration. It consists of waiting room, lounge, kitchen, office and counselling rooms, and its principal functions are those of day center and counselling center.

The question that occurs to me, and this seems central to answering my original question - whether it is or is not a good example of community psychology - is to what extent, and in what senses, this new arrangement of services is truly "non-Institutional"?. One element in this is the multidisciplinary nature of the team. It is probably important to appreciate as background that the team came into being as a result of people already working in the field agreeing to pool their resources rather than continuing to work somewhat separately. Other than the making available of the building, and the putting of it in good order, this was not a service created de novo with new staff and other resources. Hence there was no inbuilt leadership or inbuilt concensus over philosophy and methods. This lack of central direction I believe to be something to be cherished, but it brings its own difficulties.

One of these concerns leadership, control and accountability. No one person or discipline is in charge or ultimately responsible. This state of affairs is uncomfortable to us all from time to time, and more than one visitor to the Center has wondered at it. Over the first year of operation we have evolved what I earnestly hope will become a system of decision-making which is robust enough to stand the charge that we should have a more traditional form of leadership and direction. The central ingredients of this pattern are a weekly meeting of the whole team which is a forum both for case review and for discussion of any issue affecting the team, plus a smaller management team appointed by full CAT. The same person chairs both meetings, by rotation - the current chairperson is the occupational therapist. We have by no means worked out fully the relationship between the full team, the management team, and the managers of individual disciplines. This is particularly crucial when it comes to making new staff appointments. There must be a lessening of automony for individual professions if a genuinely non-disciplinary team is to be built. It is a struggle to ensure that the team has a large say in making its own appointments, and does not have members thrust upon it.

These matters are more than of purely domestic interest, and are central to the establishment of a service that is not hide-bound by traditional practices, Clinical psychology has to guard against its own brand of parochialism as much as any discipline. However, all this is a long way from involving the general public in decision-making about its own services, which was one of the grand and largely unrealized hopes of the community mental health center movement in the United States.

Although we cannot claim to involve the general public much in what we are doing, we have achieved a close integration of the statutory and the voluntary, the professional and the non-professional, the "trained" and the "untrained". The Council on Alcoholism in fact leases one of the three floors of the center from the Health Authority and this brings with it a completely new dimension consistent in my view with some of the tenets of community psychology. Local councils on alcoholism, most affiliated to the national voluntary body - The National Council on Alcoholism - sprang up around the country in the 1960's and 1970's, largely as information centers and later beginning to take on a counselling role. Directors have often been people who have recovered from drinking problems themselves, but are otherwise formal professional training, access was informal and direct, much of the work was done on the 'phone, and directors and secretaries - usually the only staff - found themselves taking on a counselling role without feeling constrained by lack of training or supervision. With the integration of the voluntary organization into the Community Alcohol Team alongside statutory services and professional workers, there is a very real danger of take-over and the submergence of these prized characteristics which the Wolfenden Committee on the future of voluntary organizations (1978) referred to.

I think we have avoided this so far, but that is not to say there are not occasional moments when the clash of professional styles becomes apparent. It is difficult for professional workers who are used to working within a tightly knit and quite hierarchical organization - I include clinical psychology in here, incidentally - to accept that relatively untrained people can effectively do some of the things that they do.

Indeed, it is not only paid members of voluntary organizations whose activities overlap with those of the professionals. One of the gains from working alongside the Council on Alcoholism has been the opportunity for clinical psychologists to get involved in the training and supervision of volunteer counsellors. Following in the wake of bodies such as the Marriage Guidance Council, the National Council on Alcoholism has supported a number of local schemes for the training of volunteer alcohol counsellors. Exeter has had one such scheme, as a result of which the Community Alcohol Team has available to it the services of five counsellors who work one evening a week at the Center. The second Devon course is under way in Plymouth, and it is pleasing to be able to report that in the case of both courses clinical psychologists have been the tutors. Neither were held back by the view that they were training people to do a job which was better done by professional, or that they were contributing to the redundancy of clinical psychologists. On the contrary, they were responding, I believe, to the logic that says that clinical psychology manpower will never be sufficient to deliver individual client services to all those that need them and that a training role is one of the most potentially effective hat we can adopt.

The use of non-professionals, or as it is sometimes awkwardly put "para-professionals", including volunteers, has been a main theme in American community psychology, and what evidence there is seems to suggest that non-professionals can be as effective as professionals in dealing with psychological problems. There has been an interesting debate on the comparative effectiveness of professionals and non-professionals in Psychological Bulletin started off by Durlak's (1975) meta-analysis of studies on this question.

Despite our success in transferring resources from hospital to community unit, the special gains that are to be had from integrating voluntary and statutory organizations, and our struggle to create a multidisciplinary group, there remains very real danger that we perpetuate in a different setting some of the very practices which the community psychology movements has been at pains to redress. In particular we may be accused of continuing to adopt what writers such as Rappaport (1977) have called a "waiting" mode of operation instead of "seeking out " mode. We still have a tendency to wait in the unit for clients to arrive and to feel that we can offer no help unless and until clients show the inclination to come to us. This is quite contrary to the view in community psychology that problems should be treated where possible in the setting in which they arise, for example in the setting of family or workplace. It is also contrary to the argument that psychologists can be more effective in an advisory or consultative role, for which there is guidance by Caplan (1970), in his book on mental health consultation, and by others. In the alcohol problems speciality, Shaw and his colleagues (1978) have argued in their book, "Responding to Drinking Problems," that the specialists should devote themselves to improving the confidence and "role security" of primary health care workers and other "generalists" such as social workers and probation officers. The Department of Health (1978) in its Working Party report on The Pattern of Services for Problems Drinkers also recommended this mode of working, and there is much evidence that drinking problems are not properly identified, let alone dealt with, in general practice Wilkins (1974) and general hospital (e.g. Jarman and Kellet, 1979) settings.

Even the tentative move that we are beginning to make in these directions, Cowen (1980) would designate as community mental health rather than community psychology proper. The latter term he would reserve for the practice of psychology which places prevention in the center of the stage. Once again close contact with the voluntary organization can be educative for those professions that have been exclusively concerned with treatment. The Devon Council has been much involved over many years in talking to school pupils about problems connected with the use of alcohol, although sadly there must be real doubts about the effectiveness of such activities, even given brave attempts at relevance and impact - for example, recently available health education "trigger films" which are short, topical, geared to the activities of young people, and designed to trigger off discussion rather than to impart knowledge or to preach.

Recent debates on the prevention of drinking problems have tended to revolve around the factor of availability and in particular around the possibility of manipulating the price of alcohol in the interests of reducing national consumption and hence national risk of alcohol problems. It is difficult to see how a Community Alcohol Team can involve itself in such matters, although the effectiveness of the medical profession in influencing attitudes about smoking should be a lesson to us.

A possibly very fruitful area of prevention concerns family members of excessive drinkers. There is much evidence to suggest that spouses and children are at high risk of experiencing psychological problems whilst they continue to live with someone who is drinking excessively (Oxford and Harwin, 1982) and in the case of children they stand a high risk of developing drinking and other problems themselves in later life. The Exeter CAT has relatively few relatives asking for help in their own right, although we believe they constitute a higher proportion of contacts that are made by phone only. There is probably great scope here for education and support of general community helping agents. Experience suggests that such agents, community nurses for example, feel impotent unless the drinker him/herself will accept help. We should be setting out to change this view, and to help those who are in a position to do so to provide some help for these at-risk groups.

Finally a word about "the community" itself. In my view, this should be a core of community psychology. In the case of drinking problems we should, if we are really practising community psychology, be getting to know how the local community helps to create and maintain drinking problems, or alternatively to restrain and prevent them. Perhaps somewhat more realistic is the aim of understanding how the local community responds to drinking problems. There is still an average delay of nearly ten years between individual problems first arising and the seeking of help. Who in the local community knows about these problems in the meantime? Could they respond, or respond more effectively? These questions should be on our agenda somewhere, but they are certainly not high up in the list at present. Nor can we claim to have made any progress in achieving the involvement of members of the community, other than the volunteer counsellors, in decision-making about the organization of alcohol services.

In conclusion, I would say that we have made a significant step in the direction suggested by those who have written on the subject on community psychology. In particular, I would wish to point to the establishment of community units with access via self-referral or the telephone, in place of a residential unit in an institution, and particularly to the involvement of the voluntary body and its trained volunteer counsellors. We are taking tentative steps towards working with community agents, but if the real criteria for a community

psychology are prevention and understanding of how the community itself is and can be involved, then we have a long way to go.

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COMMUNITY PSYCHOLOGY: SOME ALTERNATIVE MODELS OF ORGANIZATION AND PRACTICE

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INTRODUCTION

The last two decades have witnessed at least two innovative opportunities for clinical psychology in the provision of services capable of being delivered more directly to the community than has hitherto been the case in the National Health Service. One of these, primary care has been described as innovatory, but, in the absence of genuine innovation (Hawks, 1981). Indeed, evidence has accumulated (Hawks, 1981) that the move into primary care settings by psychologists has had only negligible effects on the demands for referrals received by traditional psychiatric services. The second opportunity for clinical psychologists in community psychology has been the gradual emergence of a role for psychologists in social welfare agencies.

Prior to around 1970, only a handful of applied professional psychologists were known to be employed in Social Services Departments (Bender, 1972), but nowadays advertisements for psychologists to work in social welfare agencies rather in the National Health Service or Local Education Authorities appear regularly in the professional press. In view of such rapid expansion, what models for the employment of psychological services are available to guide

future development? Can the mistakes made by clinical psychology in its failure to document carefully its move into primary care be avoided in its move into social welfare?

One of the difficulties in considering this question is the variety and number of social welfare agencies. There are, for example, 114 Local Authority Social Services Departments in England and Wales, 12 Social Work Departments in Scotland, and four Health and Personal Social Service Boards in Northern Ireland.

There are also a wide variety of voluntary organizations serving children, the mentally ill, the physically and mentally handicapped, the elderly and many other groups in the community. Although, hereafter, these various organizations and authorities are referred to by the generic term - social services setting - the present analysis is based upon a consideration of the role of psychologists in local authority Social Services Departments in England and Wales.

What all social service settings have in common is wide-ranging responsibility for welfare services in the community. In practice, this responsibility includes providing such facilities and services as day and residential nurseries, childcare services, including observation and assessment, community homes for children and old people, hostels for the mentally ill and mentally handicapped, facilities for various kinds of physical handicap, and day centers and fieldwork services for a wide variety of client groups in the community (Brown, 1981). Indeed, since the reorganization of the National Health Service in 1974, successive Governments have tended to require further and further expansion of the responsibilities of social services settings. Today, social welfare and health agencies increasingly have many common functions and responsibilities (BPS, 1982), and more will follow. This chapter reports on a preliminary enquiry into the actual size and shape of applied psychology services in Social Services Departments, and speculates about future development.

METHODS OF ENQUIRY

The basis of the chapter is a summary of Social Services Departments in England and Wales. A questionnaire was sent by the author to all 114 social services departments in England and Wales. after a brief pilot enquiry. Copies of the questionnaire were also sent to district clinical psychologists and principal educational psychologists together with a covering letter asking the applied professional psychologists to make direct contact with the social services department. It was hoped that, by these means, local authorities could collaborate with their local applied professional psychologists and identify the current scope, extent and mode of operation of psychological services in social services settings.

Table 1. Sample Characteristics

Type	Included	Total	%
London Boroughs	17	29	58.6
Metropolitan Boroughs	22	36	61.1
Shires	28	49	57.1

df = 2. chi square = 0.13.

A copy of the questionnaire is contained in an Appendix to the British Psychological Society Working Party report on Psychologists in Social Services Departments (BPS, 1982). The questionnaire asked the informants to identify the size, scope, nature and organization of psychological services in local social services settings, to evaluate the appropriateness and effectiveness of those services, and to speculate about likely advantageous future developments.

Results were eventually obtained from 68 of the 114 local authorities - almost 60% of the total. Table 1 shows that this survey sample appears to be representative of the total sample of 114 local authorities with respect to urban/rual population and therefore, broadly, of the range, extent and intensity of welfare needs in the communities served.

RESULTS

Extent of Services

Table 2 shows that 70% of the sample in the survey received services from educational psychologists, and more than 5% from clinical psychologists employed in the national Health Service. A quarter of all local authorities in the samples employed psychologists directly or by means of some jointly funded arrangement.

Figure 1 shows that, when the services are translated into half-day sessions, a total of 663 sessions per week were made available in the survey sample. Extrapolating these figures to include all 114 local authorities, it seems possible that around 1200 half-day sessions were made available to social services settings at that time or 120 full-time applied psychologists.

This figure probably represents only around 6% of the total available applied psychology manpower in England and Wales (see Barden, 1979 for Manpower Estimates). In comparison both with the total number of applied psychologists working in other parts of the public service, and the extent and intensity of the responsibility of social services settings, it is apparent that psychologists still

Table 2. Extent of Services

Source	Number of SSDs served	% of Sample
NHS	35	52.2
LEA	47	70.1
Joint Funding	7	10.4
Directly Employed	10	14.9

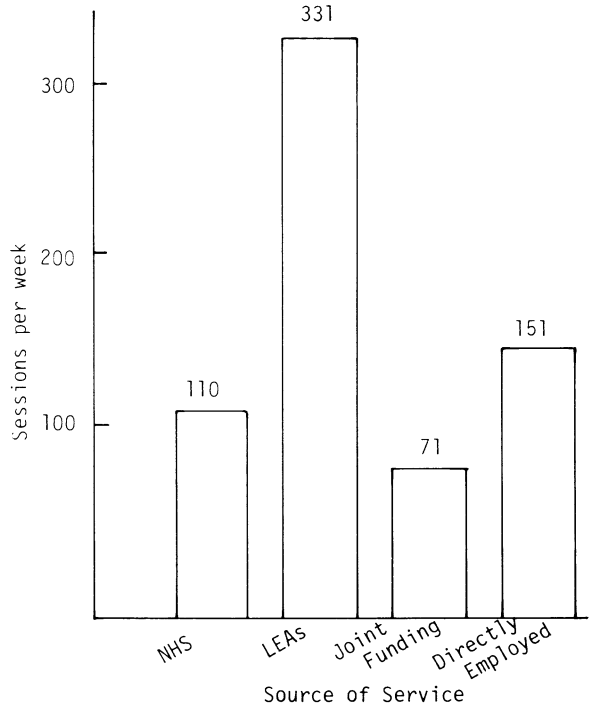

Fig. 1. Source of services

make only a relatively small contribution to the work of social services settings in England and Wales.

Figure 1 also shows the balance of services from all sources. Psychological services are provided to social services settings by educational psychologists from local education authorities; clinical psychologists from the National Health Service; and by psychologists from a number of other sources. Approximately 17% of the services are provided by NHS psychologists, 49% from local education authorities, with the remaining 34% coming from other sources. Other recent surveys (BPS, 1982), have shown a similar balance of service pro-

vision between NHS, LEA and other sources. In each of the regions, however, the contribution of the third group psychologists tends to be unique to that region. Only England and Wales does this third component appear to be expanding, and to be comprised of psychologists either directly employed by local authority social services departments (23%) or in posts funded jointly by social and other public services (11%). In Scotland and Northern Ireland, List D school psychologists and training school psychologists respectively make up the majority of the third category.

Services to Clients

For the first time, it is now possible to identify how psychologists in social services settings actually do distribute their services to the several client groups which form the target populations for the bulk of social services resources. Figure 2 shows that the bulk of psychological services in social services settings is devoted to working with children - some 59%. Much of this service is provided by educational psychologists seconded by local authorities. The survey was also able to show that psychologists tended to provide their services either in Observation and Assessment Centers, or (more rarely) in Community Homes with Education on the premises (CH(E)'s - the former approved schools), intregral parts of the comprehensive childcare system established following the 1969 Children and Young Persons Act.

Clinical psychologists provide a more varied service to social services settings, with almost 50% of their input devoted to working with the mentally handicapped. Work with children and the mentally ill appears next in importance, with only a small proportion of the

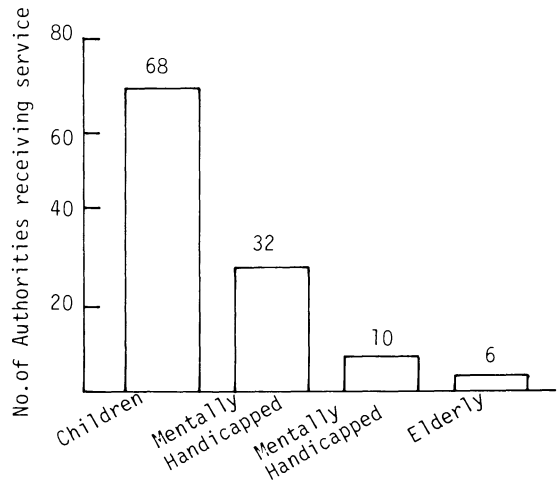

Fig. 2. Service distribution

resources made available for the elderly. The relative lack of involvement with the elderly and mentally ill is also a feature in other recent surveys in other parts of the United Kingdom (B.P.S., 1982)

It is apparent, moreover, the the majority of directly employed services in social services settings are also devoted to work with children, although some local authorities have begun recently to develop community based services for the mentally handicapped. Joint fundings services were found to be employed with a wider variety of client groups, although the majority were found in community mental handicap services.

Mode of Employment

It appears, therefore, that psychological services in social services settings have been developed using several different modes of employment. It is of some importance, in any speculation about potential models for the use of psychologists in social services settings in the future, to identify what are the current modes of financing such services, and to discuss the advantages, disadvantages of each mode. Table 3 shows that approximately two-thirds of psychological services in England and Wales are provided on a fixed basis in the survey sample. These services are funded indirectly by social services settings - the parent psychology department is normally reimbursed for the service provided by one means or another. The remaining third of the sessions are not funded by social services settings, either on the basis of such a secondment arrangement, or indeed on an ad hoc basis. It is possible, therefore, that however relevant the service offered by psychologists is to the needs of the client served, up to 30% of psychological services to social services settings have developed in an ad hoc manner. This proportion of the service is in fact funded either by the NHS or a LEA with no account taken of manpower and service planning, or coordination of the psychological service. The survey was unable to identify the extent to which these ad hoc services were provided by direct referrals from general practitioners or social workers to the psychologist. The

Table 3. Mode of Finance

	% of sessions from		
	LEA	NHS	TOTAL
Fixed - Paid for	77.9	41.8	68.9
Fixed - Not paid for	16.3	32.7	20.4
Ad-Hoc - Not paid for	5.8	25.5	10.7

question remains as to whether at least a proportion of these ad hoc services did fall within the range of tasks reasonably expected of applied professional psychologists in the NHS or a LEA.

Professional Accountability

Questions of accountability have been raised in previous discussions of the role of psychologists in social services (Sutton, 1981). Although the survey was found to ask insufficiently precise questions about accountability of psychologists working in social services settings, it did give psychologists and their social work colleagues a chance to comment on some of the issues concerning professional accountability.

In general, applied professional psychologists tended to take the view that psychologists should be professionally accountable directly to their own senior colleagues when employed in any task related to the provision of professional services, whatever the day-to-day organizational accountability might be to that setting. Responses of social services directors to these kinds of questions, however, tended to acknowledge rather more explicitly the difficulties of balancing organizational and professional accountability. The discrepancy in these two sets of view tends to suggest the psychologists have only just begun to face up to the the real complexities of providing a professional service in 'front line' local authority provision.

Qualifications

In view of the (possibly) rapidly increasing number of directly employed psychologists in social services settings, the quality and level of qualifications of applied psychologists for working in such settings is an issue which now assumes considerable importance. The majority of services provided to social services settings come from Local Education Authorities and the National Health Service. Both groups of applied professional psychologists are normally post-graduate trained as a condition of their employment. The survey was able to establish, however, the extent to which other groups of psychologists (directly employed or jointly funded) were post-graduate trained. Psychologists employed in jointly-funded posts tended to be post-graduate trained in clinical psychology, but those employed directly in social services settings tended to show a pattern of qualification in marked contrast to this. In fact, two-thirds of the local authorities who employ their own psychologists were found to require only a first degree in psychology as a necessary qualification. In these authorities, post-graduate training in applied professional psychology of any kind was not a requirement. In appears then, that fears expressed in previous papers (Brown and

Sawyer, 1978) that safeguards of professional standards might be less in evidence in this growing sector of employment for psychologists are not without some grounding.

Management-Consultancy Liaison

The data described in the previous sections have outlined the nature and extent of services provided, and hint at the kind of roles which psychologists are beginning to play. Much more, however, can be gleaned from the survey than these quantitative data. Qualitative analysis of the questionnaire returns derive mostly from those items in the original questionnaire which asked informants to describe more detailed features of their role.

Accountability and responsibility was found to be one area for debate and discussion. Psychologists need to satisfy themselves that, in their work in social services settings, there are sufficient facilities to be able to maintain the confidentially of a client and to be able to undertake adequate and appropriate professional intervention with their client in that setting. However, there may be some social services settings in which the responsible manager decides to pursue policies which will reduce the psychologist's right or ability to maintain confidentiality, or to undertake what the psychologist considers to be an ideal intervention. Such decisions may have a financial, political or expedient basis. Under such circumstances, the psychologist needs to liaise closely with the managers in order to clarify respective roles and expectations. Examples of this problem appear most likely, at the moment in situations where the psychologist, as a necessary component of delivering a package of behavioral interventions with a disturbed adult or child living in residential social services establishment, is unable to gain the active support and commitment of the superintendent or manager of the setting to extend certain aspects of the package to the residential setting itself. The psychologist needs to be able to withdraw their services if agreement about what can (and should) be accomplished cannot be reached.

However, it is not always clear in social services settings where consultancy and direct services or managerial roles begin and end. (This is particularly evident where the psychologist is working intensively in a consultative and advisory role in such settings as residential homes or in day nurseries and centers.) What is actually meant by consultancy in this context? One way of defining the nature of consultancy is to limit the notion to the input of the professional in which time is made available for the consultee (at the behest of the consultee) to present what he or she sees as a problem. The consultant offers an opportunity for reflection on that problem in such a way that the consultee is, potentially, able to work out some or all of the implications of the problem to the advantage of the client or patient.

The consultant has, necessarily, to be detached from the situation and to use such detachment and knowledge of that and other similar situations to enable the consultee to maximize his or her knowledge of skills and strengths and to increase understanding of the situation. It is impossible for the psychologist to act as a consultant in this sense, and at the same time be in the position of exercising executive management responsibility for the member of staff. In addition, psychologists cannot be expected, by managers in the social services setting, necessarily to embrace the objectives of the setting itself when offering such consultation. The prime objective of the consultation is to serve the consultee rather than the institution in which the consultee works, although the client or patient should also (secondarily) be a beneficiary.

Whether the psychologist works in a consultancy role, a direct treatment role, or simply offering advice, there is a clear need to liaise closely with managers in social services settings in such a way that the many subtle distinctions between the roles of consultant and manager are clearly understood in that particular social services setting, and if necessary, to redefine these roles if services develop and change.

Models for Employment

From the qualitative and quantitative data already described, it is possible to identify the range of options available to applied psychologists for employment in social services settings. These options appear to be:

Direct Employment. Direct employment of psychologists tends to be viewed with favor by some social services settings, perhaps because the advantage for the setting is that the psychologist, by being directly employed, can be absorbed easily into the day-to-day life of the establishment in which he or she works, rather than having allegiances and priorities elsewhere.

Such an advantage has been acknowledge by psychologists who are themselves directly employed in social services settings where the psychologist is expected to become involved with the day-to-day management of the services. From a broader perspective, however, there are clear disadvantages to direct employment. Few authorities are able to employ more than one psychologist. Professional isolation, therefore, and a lack of appropriate professional models for the psychologist have, perhaps, to be taken into account. Also, social services settings do not have a career structure into which psychologists can fit easily if they are to remain as psychologists, neither does it seem likely that social services settings will be able to afford, or wish to make, financial provision for post-graduate training in applied psychology for their own psychologists.

Joint Funding. Joint funding money made available to local authorities and the NHS for collaborative instructing by central government appears to have become an increasingly favored mode for the employment of clinical psychologists in innovative practice. The advantages of joint funding appear to be most clear where the nature of the professional service required by the social services setting is action-research (or service development) rather than a well-established clinical service direct to clients.

Whilst joint funding appears to be a useful means of developing new services, the major disadvantage of this mode of employment is that the long-term potential for the development of more stable and permanent services is unclear. Long-term follow-up of established joint-funded posts needs to be carried out, with particular attention being paid to the tapering off or taking over of the financing of the posts by the parent psychology departments at the end of the fixed period of joint funding, normally three, five or seven years.

Contracted Services. Contracted service is a variation of direct employment, but differing in that the psychologist is employed in order to carry out a particular project. The contracted service is for a fixed time period, with fixed objectives, rather than one offering an open-ended direct clinical service to clients. There appears to have been little development of this approach to the purchase of psychological services, and since it is not uncommon for local authorities to purchase management, research and development, and consultative services from relevant commercial companies from time to time, the paucity of example of this kind of purchase of service may reflect the reluctance of psychologists themselves to market their service on any extensive scale outside the public service. Were there to be independent departments of applied psychology, this mode of employment might well appear more attractive. The absence of more than a handful of examples of practice of this kind make it difficult to draw further conclusions about advantages and disadvantages of this mode of employment.

Secondment from the NHS or a LEA. Secondment from either educational or health authorities can take various forms, and is the predominant mode of employment of services throughout the United Kingdom. The advantages for social services settings of this mode of employment have mainly to do with the relative ease of employment, recruitment and maintenance of professional standards. The primary responsibility for recruitment, maintaining of standards and administrative matters tends to devolve to the parent psychology department in the NHS or LEA, an arrangement which also has the advantage of helping to develop links between social services settings and other public services. The maintenance of the quality of the professional service through professional accountability to senior colleagues in the various applied psychology services elsewhere, and the availability of a viable career structure for psychologists, are additional advantages.

Some precautionary warnings about this model should be sounded, however. Whilst professional accountability to the guidelines and ethics established by the British Psychological Society is necessary for applied professional psychologists, in their work in social services settings, psychologists may have organized lines of accountability within the management structure of the setting itself. The co-existence of both professional and organizational lines of accountability can be a particular problem where psychologists seek to expand their role within social services settings beyond simple direct services to individual clients, and into the fields of advisory, consultative, policy and planning levels of work.

Ad Hoc Services. The results obtained in the survey have almost certainly been an underestimate of the total provision by psychologists in social services settings, since the survey has failed to identify precisely the extent of ad hoc services. What is less obscure in the survey is that clinical psychologists, in the NHS in particular, but also educational psychologists from LEA's, do provide ad hoc services on day-to-day demand from social services settings without there being any funding requirement on the social services. The advantage of the mode of employment to the social services setting is, of course, that is is free! It is also likely to be a highly flexible arrangement.

The disadvantages of ad hoc provision of service, however, are considerable. Firstly, such services are unlikely to be planned, or capable of being evaluated. Secondly, the existence of such services probably depends upon individual arrangements between psychologists and social services managers, arrangements which may undergo extinction or unhelpful change when one or other of the individuals takes up a new post elsewhere. Thirdly, there are potentially difficult legal implications of such ad hoc service arrangements. Examples of possible legal complications which could arise include breaking of contractual arrangements with the NHS or LEA by the psychologist, and possibly the absence of appropriate indemnity insurance, or protection against claims for negligence, or personal and third party injury if travelling or passenger-carrying is involved. Fourthly, there are major disadvantages to ad hoc provision of services in manpower planning and organization for both social services settings and psychologists. Ad hoc services tend to be provided only at the lower level of service input, usually direct clinical services, or occasionally staff training or support. Such a level of input on its own may be of little value, without corresponding involvement in considering the broader implications of providing a psychological service as an integrated component of social service. From the point of view of the parent psychology department, an ad hoc arrangement may enable a preliminary pilot development of a service to be tried out. In the long run, formal service arrangements are necessary in order for the demands on the service to be reflected in increased manpower provision.

CONCLUSION

This chapter has argued that, in view of the limited roles available, the most appropriate role for psychologists in social services settings is a consultative and advisory one. At the same time, psychologists working in such settings should be subject to the same conditions of employment, ethical and legal constraints, and lines of accountability as psychologists employed in the National Health Service or Local Education Authorities. On the whole, it appears desirable that psychologists employed for work in social services settings as psychologists should be employed by, and be seconded from, either a parent clinical psychology department in the NHS, or a parent educational psychology department in a Local Education Authority, or an equivalent parent applied psychology department.

Successive government policies to locate services in the community for the mentally ill, mentally handicapped and the elderly have probably required expansion of existing psychological services in the NHS. Further expansion in these areas will become essential if there is to be any further transfer of responsibilities for care of these client groups to social services. However, absolute levels of service necessary for each client group are difficult to estimate at the moment, in view of further reorganization of the responsibilities both of local authorities and for the long-term needy. Before any expansion of services, however, there is a need to examine with great care a number of difficult problems facing psychologists moving into social services settings, including the establishing of liaison with social services management, and terms of accountability and responsibility. Such problems should not, however, be allowed to obscure the staggering potential for constructure, innovative and collaborative work by psychologists in the social services sector of the Welfare State.

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