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A PSYCHIATRIC STUDY OF UNEXPLAINED PHYSICAL SYMPTOMS

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Based on research conducted while the author was a member
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SUMMARY

Title

A Psychiatric Study of Unexplained Physical Symptoms

Aim

This study investigated diagnostically puzzling physical symptoms, the type of symptoms psychiatrists are sometimes asked to evaluate. While it was hoped that an addition to knowledge would be made by conducting an original clinical investigation, important aims of the study were also to clarify and re-organise existing knowledge in the literature, to generate hypotheses, and to make recommendations concerning further research.

Methods

1. Definitions: Definitions were provided for certain key phrases. 'Unexplained physical symptoms' were defined as 'physical symptoms suggesting physical disorder for which the majority of physicians in the Western World would be unable to agree upon the presence of an organic explanation or a psychiatric explanation'.

2. Literature Review: An assumption was made that 'unexplained physical symptoms' represent valid medical entities, so existing knowledge concerning such symptoms was organised and presented in a way appropriate to this supposition, as follows - terminology, classification, validity, clinical features, prevalence and clinical importance, pathological mechanisms, aetiology, and treatment. The discussion on validity included an examination of the means of reliably excluding organic and psychiatric explanations for physical symptoms. A dearth of clinical descriptive data was found, which means that current knowledge about the clinical features and prevalence of disorders consisting of unexplained physical symptoms is very provisional. However, a consistent finding has been a strong association between non-organic physical symptoms in general and psychiatric illness. Certain potential pathological mechanisms, in particular, those involving pain perception, sensory information processing, and the autonomic nervous system, and some potential aetiologies, such as, gender, personality, central nervous system dysfunction, psychodynamic factors, sociocultural factors, life events, and behavioural reinforcement, were discussed, and it was concluded that further research in these fields could help to explain 'unexplained' physical symptoms.

The literature review pointed to several areas in need of further research. This research will require to be of better methodology than in the past, and it would also benefit from the development of a valid clinical syndromal system of classifying 'unexplained' physical symptoms.

3. Clinical Investigation: The clinical investigation aimed to provide detailed clinical descriptive information on patients, with 'unexplained physical symptoms' of at least 6 months duration, who came from a sample approximately representative of the general population. Such an investigation had not, to my knowledge, been carried out before.

The sample, of 1,736 individuals in the age range 20-59, was obtained from two general practices. Only 8 'index' patients were detected. Clinical descriptive information was provided for these 8 patients by means of standardised case summaries. Similar case summaries were given for an unrepresentative sample of 11 patients with 'unexplained physical symptoms' of at least 6 months duration, referred to my psychiatric outpatient clinic. The general practice study also collected information about patterns of consultation for the complete patient sample. It was observed that a group of patients existed

who consulted very frequently, with physical symptoms usually short in duration, which varied over time, and which often appeared 'unexplained'. By means of arbitrary quantification, a subgroup within these consulters was identified, and termed 'fluctuators'.

Results and Conclusions

The prevalence in this community-based sample of 8/1,736 for 'unexplained physical symptoms' of at least 6 months duration was lower than expected. It contrasted with 26/841 for the 'fluctuators', and 50/841 for 'organic' physical symptoms of at least 6 months duration (these last two prevalence figures were only calculated for one of the general practices).

It was argued that supplying and analysing detailed clinical descriptions of cases was worthwhile. The psychiatric outpatient series was also used for this analysis. Among several findings was the emergence of two broad clinical syndromal subclassifications which may apply to 'unexplained physical symptoms'. One has already been referred to, and differentiated symptoms persisting for at least 6 months from symptoms of mostly short duration, varying frequently in type and site, and occurring on the background of high consultation rates

(the 'fluctuators'). It was proposed that these represent different phenomena and should be investigated separately. The second subclassification applied only to index patients with chronic symptoms. This distinguished symptoms following an episodic course which were 'autonomic function' in type (termed 'atypical panic disorder'), from painful symptoms following a constant course (termed 'idiopathic pain disorder').

Recommendations:

Several recommendations were made concerning future research in this field, several of which applied to research methodology. Among these recommendations was the suggestion that the sort of clinical descriptive investigation carried out in the present study be extended to cover large patient samples in the hospital setting, in order to try and establish a clinical syndromal classification for 'unexplained physical symptoms', and in order to investigate further the relationships between unexplained physical symptoms and psychiatric illness.

Some recommendations were also made concerning clinical practice. Among these was the proposal that 'unexplained' symptomatic states be given greater status

within clinical medicine. Rather than implying diagnostic ignorance, the diagnosis of such an 'unexplained' disorder should be regarded as acceptance that much remains to be learned about physical symptom production.

PART I

INTRODUCTION AND REVIEW OF LITERATURE

This Thesis is about physical symptoms which suggest physical disorder for which there are no demonstrable organic findings. These symptoms have the reputation in medicine of being difficult to manage. Psychiatry has long been involved in the attempts to understand such symptoms and the phrase, 'physical symptoms suggesting physical disorder for which there are no demonstrable organic findings', is borrowed from one classification of psychiatric illness, the Diagnostic and Statistical Manual of Mental Disorders (DSM-III)(American Psychiatric Association, 1980), where it contributes to the definition of one group of psychiatric disorders, the Somatoform Disorders. These are somatisation disorder (formerly Briquet's syndrome), conversion disorder, psychogenic pain disorder, hypochondriasis and atypical somatoform disorder.

It should be emphasised that this Thesis is only applicable to adult medicine.

Some elements of the statement 'physical symptoms suggesting physical disorder for which there are no demonstrable organic findings' will be defined for the purpose of this Thesis. These are 1. 'physical symptoms', 2. 'organic findings', 3. 'suggesting physical disorder'.

1. 'Physical symptoms': these will be defined as subjective complaints concerning perceived abnormalities in a part of the body or in the function of a part of the body. Thus, the expression of worry about some part of bodily function in the absence of a sensorially perceived abnormality is not a 'physical' symptom - it is a 'psychological' symptom.

The physical symptoms most relevant to this Thesis will be subdivided into four symptom types - (i) painful symptoms, (ii) symptoms of the autonomic function type, (iii) symptoms of the somatic function type, (iv) generalised symptoms.

Painful symptoms do not require elaboration. Symptoms of the autonomic function type will include symptoms referable to organs predominantly controlled by the autonomic nervous system - thus, palpitations, vomiting, diarrhoea, urinary frequency, among others, will be categorised here. Symptoms of the somatic function type will apply to disturbances of motor function and to symptoms referable to vision and hearing. Generalised symptoms will include fatigue, feverishness and dizziness, among others. This subdivision is based closely on that used by Morrell et al.(1971a) in their general practice research. My adapted version is shown in full in Figure 2.a (page 266).

2. 'Organic findings': these will be defined as the presence of pathological processes or mechanisms which

are structural, biochemical or physiological, which can be reliably defined and measured, and which contribute to the definitions of validated diseases. The presence of such organic pathological processes, and the fact that they explain the presenting physical symptoms, would be accepted by the majority of physicians in the Western World. Thus, idiosyncratic organic explanations which may occasionally be used in practice are not included.

The term 'explanation', which will be used frequently throughout this Thesis, will refer to the following: the presence of pathological mechanisms and/or aetiologies, which can be reliably defined and measured, and to which the physical symptoms in question can be confidently attributed.

The division of physical symptoms into those with organic explanations and those without has been criticised (Menges, 1982), but for the purpose of scientific research, I believe that the differentiation of organic from non-organic is helpful, because it allows each set of symptoms to be examined separately. For the sake of clarity I have chosen to study only symptoms for which organic explanations have been excluded. I am aware that the mechanisms and causes which must underlie non-organic physical symptoms can also influence organic physical symptoms. Although this non-organic elaboration of organic symptoms does not form part of my investigation, any conclusions reached should be relevant to this issue also.

3. 'Suggesting physical disorder': this indicates the presence of a minimum degree of severity. Symptoms are therefore not of the trivial type that many individuals experience.

Unexplained Physical Symptoms

Non-organic physical symptoms can result from psychiatric illness. The psychiatric illnesses which can produce these symptoms will be reviewed in detail in chapter 4. The clearest examples are depressive illness, anxiety states, and illnesses of known psychological aetiology, namely, conversion disorder, psychogenic pain disorder, and adjustment disorder. If physical symptoms can be confidently attributed to any of these disorders, then there is justification in saying that a psychiatric explanation exists. It will be noted that 'explanation' refers here predominantly to aetiology, rather than pathological mechanisms, because the underlying mechanisms via which psychiatric illness produces physical symptoms are poorly understood.

Other non-organic symptoms are not produced by psychiatric illness, and are apparently unexplained by either organic disease or psychiatric illness. It is upon these unexplained physical symptoms that this Thesis will concentrate. 'Unexplained physical symptoms' can only be given a rather abstract definition - 'physical symptoms suggesting physical disorder for which the

majority of physicians in the Western World would be unable to agree upon the presence of an organic explanation or a psychiatric explanation'.

As a psychiatrist my interest in this area was initially prompted by the patients with severe and puzzling non-organic physical symptoms who are sometimes referred to psychiatric departments. However, I soon realised that in order to try and understand this severe subgroup, it would be necessary to consider 'unexplained physical symptoms' in every setting. A preliminary examination of the literature confirmed my belief that this field has been inadequately researched. I found that this was the view of a number of recent authors (for example, Barsky & Klerman, 1983). One problem evident in the past literature was the tendency to view non-organic symptoms as being 'psychiatric' in explanation without, in my opinion, sufficient evidence. Hence my use of the category, 'unexplained'. The point must be made that I am not forwarding 'unexplained physical symptoms' as some new nosological entity. The phrase will be used as a means of categorising symptoms more clearly to permit further scientific research which, it is hoped, will turn unexplained symptoms into explained symptoms.

This examination of the literature also suggested to me that most previous research had not been holistic enough. I had already been influenced to approach medical research holistically during previous research

into hypertension (Melville & Raftery, 1981; Steptoe et al. 1982; Steptoe et al. 1984). In this research, both psychological factors (personality traits) and physiological factors (vascular reactivity) had been examined, separately and in interaction.

Terminology

I have proposed using the simple term 'unexplained' to describe 'physical symptoms suggesting physical disorder for which the majority of physicians in the Western World would be unable to agree upon the presence of an organic or a psychiatric explanation'. A variety of other terms have been used in the literature to describe similar symptoms.

'Non-organic' describes all symptoms without demonstrable organic explanations, but will include symptoms which have psychiatric explanations.

'Somatoform' (that is, physical disorder-like) describes symptoms which have a minimum of severity such that a physical illness is suggested - however, this term is currently used in DSM-III to describe a group of five psychiatric disorders, and more extensive use of the term could cause confusion.

'Psychogenic' and 'somatisation' are terms available only if there is definite evidence of psychological aetiology. 'Somatisation' refers here to the expression

of emotional distress via bodily symptoms - use of the term in this way has the disadvantage that it is used differently in DSM-III where 'somatisation disorder' describes a pattern of multiple and recurrent physical symptoms starting before the age of 30 years and does not include any reference to aetiology in its definition.

'Hypochondriacal', 'hysterical', 'functional', and 'psychosomatic' are other terms in common use which, although referring to non-organic symptoms, do not clarify whether or not psychiatric explanation is present. 'Hypochondriacal' has been used with a variety of meanings in the literature. Most commonly, the term is used to describe excessive concern with health or bodily functioning (see International Classification of Diseases, W.H.O., 1975) - physical symptoms do not even have to be present. 'Hysterical' has also been used in a variety of ways. The correct use refers to the presence of dissociation (Merskey, 1978) which can be applied to only one group of non-organic physical symptoms, namely, conversion symptoms. 'Functional' is a popular term used to describe non-organic symptoms. Trimble (1982) strongly criticised the use of 'functional' in this way, and recommended reverting to the original medical use of the term which was to describe disorders of physiological function. 'Psychosomatic' is also too ambiguous to be useful in this field (Lipowski, 1982).

'Abnormal illness behaviour' has become another

popular way of referring to unexplained physical symptoms. The phrase was introduced by Pilowski (1969 and 1978) in an attempt to improve the semantic confusion caused by terms such as 'hypochondriasis' and 'hysteria', and was defined as follows: 'the persistence of an inappropriate or maladaptive mode of perceiving, evaluating and acting in relation to one's own state of health, despite the fact that a doctor (or other appropriate social agent) has offered a reasonably lucid explanation of the nature of the illness and the appropriate course of management to be followed'. The phrase, 'abnormal illness behaviour', seems to be unsatisfactory for several reasons, and has been criticised elsewhere (Mayou, 1984). It gives a great deal of credit to the reliability of a single doctor's diagnostic opinion. And it implies that 'abnormal behaviour' is responsible for unexplained physical symptoms, which does not encourage the consideration of other possible mechanisms and aetiologies.

This confusion of terms does not assist an examination of previous literature. Terminology will require clarification before worthwhile progress will be made by research in this field.

Plan of This Thesis

My literature review indicated that certain specific areas concerning 'unexplained physical symptoms' were in need of further research. Each of these areas will form

a chapter (chapters 2-8) in the literature review part of this Thesis, where current knowledge will be reviewed.

1. detailed clinical descriptions of patients with 'unexplained physical symptoms' in different medical settings

2. methods of excluding organic disease with confidence.

3. clarification of what proportions of non-organic symptoms can and cannot be explained by psychiatric illness.

4. improved classification of the disorders consisting of 'unexplained physical symptoms', allied to efforts to establish diagnostic validity for these disorders.

5. the prevalence of 'unexplained physical symptoms' in different medical settings.

6. the pathological mechanisms which underlie 'unexplained physical symptoms'.

7. the aetiology of 'unexplained physical symptoms'.

Investigations into treatment for unexplained symptoms have also been performed and some of this literature will be reviewed in chapter 9. Treatment data must however remain provisional, in my opinion, until further research is conducted on the other areas mentioned.

Part II of this Thesis will describe a clinical investigations carried out by myself. Part III will consist of overall discussion, conclusions, and recommendations.

Chapter 2 CLASSIFICATION ISSUES WITH REFERENCE TO
UNEXPLAINED PHYSICAL SYMPTOMS

Classification in medicine can aid communication, can provide predictive information concerning likely course and treatment response, and can help the medical research worker by providing valid illness entities to investigate (Spitzer & Williams, 1980). Classification can be based on clinical syndrome, pathological mechanism, or aetiology, or on a combination of these. When based on clinical syndrome, patterns of symptoms and signs are usually used, but other clinical information which can be used is illness course, response to treatments, and genetic data from family medical histories (Spitzer & Williams, 1980). In physical medicine there may exist a certain amount of neglect of the principles of disease classification. In addition, the possibility that disease can be defined in terms of clinical features only may be overlooked. Nowadays such conditions are uncommon in physical medicine. These two points are illustrated by reference to some current medical textbooks. The Oxford Textbook of Medicine (Weatherall et al. 1983) and the Cecil Textbook of Medicine (Wyngaarden & Smith, 1982) do not discuss the principles of disease classification at all. Harrison's Principles of Internal Medicine (Isselbacher et al. 1980) does so briefly but describes a clinical syndrome in terms of both clinical features and pathological mechanism, with the implication that clinical features alone would not

qualify.

In psychiatry issues of classification are prominent, probably because classification is often difficult. Knowledge of pathological mechanisms and aetiology is often not available to help. The classification of mental illness has resulted in debate. Opposition has been made on philosophical grounds (for example, Menninger, 1963) and on the grounds of low reliability (for example, Kanfer & Saslow, 1969). But supporters of classification have stated that "to discard classification is to discard scientific thinking" (Shepherd, 1976) and "the failure to define adequately the essential common characteristics of the patients who constitute its subject matter is the most serious defect of contemporary psychiatric research" (Kendell, 1975). So, at least for the purposes of research, classification would seem to be a worthy aim.

Spitzer & Williams (1980) outlined a number of requirements before the validity of any proposed classification system could be accepted.

1. Recognisable clinical syndromes should exist which consist of typical constellations of symptoms, signs, or altered behaviour.

2. These syndromes should be 'undesirable' because they typically lead to distress or disability.

3. There should at least be an inference that the syndromes are associated with disturbances of function (that is, pathological mechanisms).

4. The syndromes may have typical associated features such as course, treatment response, family history, but these features are usually too variable to be included in the definition of the syndrome.

5. When aetiology is known it should usually be incorporated into the definition of the syndrome.

Spitzer & Williams (1980) proceeded to discuss the principles of validity. They described four methods of establishing validity for an illness.

1. Face validity: where an adequate consensus exists among experts on how a syndrome is defined.

2. Descriptive validity: the extent to which the characteristic features of an illness are unique and can discriminate between that illness and others.

3. Predictive validity: the extent to which a defined illness can predict subsequent course, complications, and response to treatment.

4. Construct validity: the extent to which the illness as defined exhibits mutual support to theories concerning pathological mechanisms or aetiologies.

These authors stated that when a proposed illness entity is being developed, it is usual to start with evidence of face validity and descriptive validity, followed in time with evidence of predictive validity and construct validity.

Four different methods have been used in the classification of diseases - the categorical, the dimensional, the multiaxial, and statistical methods such

as cluster analysis (Clare, 1979). The categorical method is the most widely used for reasons of clarity, although for many mental disorders the categorical method has not produced strong validity (Kendell, 1982). The multiaxial method has been forwarded as potentially the most valid in classifying mental disorders because each axis can be defined in a relatively unambiguous way (Mezzich, 1980). It has been proposed that the multiaxial method might be particularly useful for atypical disorders (Ottoson & Perris, 1973). The clarity of the categorical approach would however be lost. Proposed multiaxial methods in psychiatry include that of Hoche (1912) - symptomatology and course, Essen-Moller (1971) - symptomatology and aetiology, and Ottoson & Perris (1973) - symptomatology, severity, course, and aetiology.

Classification of Disorders Consisting of Unexplained

Physical Symptoms

Very little work has taken place on the classification of disorders consisting of 'unexplained physical symptoms', to see whether valid clinical syndromes exist. Spitzer & Williams (1980) would argue that this work should first seek descriptive validity and face validity, followed by attempts to establish predictive validity and construct validity. It is difficult to see how knowledge in this field, for example, prevalence, pathological mechanisms, aetiology, treatment, can be advanced without a valid clinical syndromal classification.

Table 1a. Categories Available in ICD-9 for Disorders
Consisting of Unexplained Physical Symptoms

300.1 Hysteria

'Mental disorders in which motives, of which the patient seems unaware, produce either a restriction of the field of consciousness or disturbances of motor or sensory function which seem to have psychological advantage or symbolic value. ...'

300.7 Hypochondriasis

'A neurotic disorder in which the conspicuous features are excessive concern with one's health in general or the integrity and functioning of some part of one's body....'

306 Physiological Malfunction Arising From Mental Factors

'A variety of physical symptoms or types of physiological malfunction of mental origin, not involving tissue damage and usually mediated through the autonomic nervous system. ...'

Stated examples include hyperventilation, cardiac neurosis, psychogenic pruritus, cyclical vomiting, and psychogenic dysmenorrhoea.

307.8 Psychalgia

'Cases in which there are pains of mental origin, e.g., headache or backache, when a more precise medical or psychiatric diagnosis cannot be made.'

The psychiatrist confronted with a patient with unexplained physical symptoms has the choice of certain existing diagnostic categories - in the International Classification of Diseases (ICD-9)(W.H.O., 1975) and in DSM-III (American Psychiatric Association, 1980). In ICD-9 the following categories are available (Table 1a) - 'hysteria', 'hypochondriasis', 'physiological malfunction arising from mental factors', and 'psychalgia'. I can find no evidence in the literature which would support validity for these four diagnostic categories. ICD-9 also includes categories for painful symptoms thought to be neither organic nor psychiatric in explanation and these are based on body site (Table 1b). This does not

Table 1b. Other Categories Available in ICD-9 for
Unexplained Physical Symptoms

789.0	Pain in abdomen
786.5	Pain in chest or anginoid pain
729.5	Pain in limb
724.5	Pain in low back
784.0	Pain in head or face
719.4	Pain in joint
723.1	Pain in neck
724.1	Pain in thoracic spine

permit the easy classification of painful symptoms of

multiple site nor of symptoms of multiple symptom type (for example, pain and autonomic function type symptoms). It is recognised (W.H.O., 1975) that ICD-9 is a compromise between body site, clinical features, pathological mechanism, and aetiology, with the emphasis on aetiology. As far as the mental disorders in ICD are concerned, as long ago as 1959 did Stengel (1959) advise that operational criteria based mainly on clinical features should be used for classification, and that aetiological issues, which were usually controversial, should be avoided.

It is this approach that is taken in DSM-III. Clearly worded diagnostic criteria, both inclusion and exclusion, predominantly based on clinical features are used. The psychiatrist using DSM-III might try and classify unexplained physical symptoms as one of the Somatoform Disorders (Table 2). These are 'conversion disorder', 'hypochondriasis', 'somatisation disorder', 'psychogenic pain disorder', and 'atypical somatoform disorder'. Although much more work has gone into attempts to establish validity for these DSM-III categories than for their corresponding categories in ICD-9, further evidence of validity remains to be found (Hyler & Sussman, 1984). This is especially true for 'hypochondriasis' (Hyler & Sussman, 1984). Should validity be established for two of the Somatoform Disorders, namely, conversion disorder and psychogenic pain disorder, then these categories would not be available for the classification of 'unexplained' physical symptoms, because known aetiology

acts as one of the diagnostic criteria. These categories could then only apply to symptoms with a 'psychiatric explanation'. This leaves 'hypochondriasis', 'somatisation disorder', and 'atypical somatoform disorder' as available categories. These are all disorders of dubious or unproven validity, indicating how ill-developed is the classification of disorders consisting of unexplained physical symptoms.

Table 2. The Somatoform Disorders as Defined in DSM-III

300.11 Conversion Disorder

'The essential feature is a clinical picture in which the predominant disturbance is a loss of or alteration in physical functioning that suggests physical disorder but which instead is apparently an expression of a psychological conflict or need. ...'

300.70 Hypochondriasis

'The essential feature is a clinical picture in which the predominant disturbance is an unrealistic interpretation of physical signs and sensations as abnormal, leading to preoccupation with the fear or belief of having a serious illness. ...'

300.70 Atypical Somatoform Disorder

A 'residual' category

Stated example, dysmorphophobia.

Table 2. (continued)

300.81 Somatisation Disorder

'The essential features are recurrent and multiple somatic complaints of several years' duration for which medical attention has been sought but which are apparently not due to any physical disorder. The disorder begins before the age of 30 and has a chronic but fluctuating course. ...'

307.80 Psychogenic Pain Disorder

'The essential feature is a clinical picture in which the predominant disturbance is the complaint of pain, in the absence of adequate physical findings, and in association with evidence of the aetiological role of psychological factors. ...'

Summary of Chapter 2

Classification can help clinical research by producing valid illness entities to investigate. The further investigation of 'unexplained physical symptoms' would benefit from an improved system of classifying the disorders produced by these symptoms. With the present state of knowledge, classification of these disorders should be based mostly on clinical syndromes and not on pathological mechanisms or on aetiology. Face validity and descriptive validity should be sought first, followed by predictive validity and construct validity. The introduction of the Somatoform Disorders to DSM-III, where diagnostic criteria are used based predominantly on clinical features, seems to be an advance but further progress is required. Methods other than the categorical system, such as the multi-axial and the statistical, may be worth exploring. Only when an improved system of classification is developed for disorders consisting of 'unexplained physical symptoms', will significant advances be made in the investigation of prevalence, pathological mechanisms, aetiology, and treatment.

Before 'unexplained physical symptoms', indeed all non-organic physical symptoms, can be properly researched, it will be necessary to have ruled out organic causes with all possible confidence. One of the diagnostic criteria for psychogenic pain disorder in DSM-III states: 'after extensive evaluation, no organic pathology or pathophysiological mechanism can be found to account for the pain'. However, accurate methods which discriminate between organic and non-organic symptoms do not always exist, and one author (Reuben, 1984) has recently called for more research in this specific area. It is an issue which many previous studies on non-organic physical symptoms may have neglected. The situation is confounded by the fact that 'extensive evaluation' (see above) can last a long time before the sort of diagnostic certainty is reached that most research studies demand. But a prolonged period of investigations, observation, and even trials of treatment could, in theory, reinforce the presence of the symptoms in question and reinforce the idea in the patient that these are probably organic in origin - in other words, 'unexplained physical symptoms' could be created by the diagnostic process itself. One author (Todd, 1984) believes that patients with chronic unexplained physical symptoms are over-investigated in the U.K.

The following methods can be used to diagnose or rule

out organic disease for research purposes:

1. Routine clinical diagnosis
2. Confidence scores
3. Symptom profiles
4. Panel of specialists
5. Special investigations

1. Routine clinical diagnosis: when medicine is performed to a high standard, the routine diagnosis reached by a single hospital specialist is probably a fairly reliable measure. However, the principles underlying diagnosis-making may be different for routine clinical work from those applying to clinical research. Thus, a routine diagnostic opinion that organic disease is absent may actually mean that the probability of this being correct lies between say 70-100%. Furthermore, routine diagnosis may often be partially based on subjective judgement which could be a source of bias and reduced accuracy. Finally, many doctors may be reluctant to commit themselves to the exclusion of organic disease, because of a fear of missing an organic disorder, or because of a reluctance to give a non-organic diagnosis given the uncertainties about management which currently prevail. The latter could be a factor in cases where quasi-organic diagnoses are made such as the 'mitral valve prolapse syndrome' and the 'irritable bowel syndrome'.

In conclusion, the use of routine clinical diagnosis

may not be reliable enough to permit the adequate investigation of difficult areas such as 'unexplained physical symptoms'.

2. Confidence scores: given that routine clinical diagnosis is essentially a statement of probability, might reliability be improved if the diagnosing doctor was allowed to quantify this probability? This approach was used by Hampton et al.(1975) in their investigation of the relative contributions of history-taking, physical examination, and laboratory investigations, to diagnosis. Each doctor was allowed a differential diagnosis of four conditions, including 'don't know', and was allowed to distribute 10 points among these conditions. Thus, a very confident diagnosis, which sometimes was 'don't know', attracted 9 or 10 points.

3. Symptom profiles: patterns of symptoms and signs have been studied statistically to see whether certain profiles can discriminate reliably between organic and non-organic disorders. Relative success has been achieved for abdominal symptoms (Manning et al. 1978), cardiac-type chest pain (see Brandon, 1983), breathlessness (Burns, 1971), and back pain (Waddell et al. 1980; Waddell et al. 1984a), but in most studies, a significant degree of overlap remained. An interesting investigation was carried out by Costa et al.(1985). This group examined the relationships between certain symptoms and the presence of coronary artery disease (C.A.D.) on coronary angiography. Not only was a very

extensive list of symptoms used, data collection consisted of a two week 'behaviour analysis' using patient self-report diaries, a method thought to be more accurate than the single medical case-history. Only chest pain on exertion correlated significantly with C.A.D. Five symptoms correlated significantly with the absence of C.A.D. - chest pain at night, right lower chest pain radiation, infrequent rest to cope with chest pain, sighing associated with chest pain, and dizziness associated with chest pain.

4. Panel of specialists: the expertise of specialists in using all available information to reach a diagnosis could be used, but the bias which might result from the element of subjective judgement could be reduced by using a panel of two or more. The panel could attempt to reach a consensus diagnosis or each member could reach an individual diagnosis with measures of inter-rater agreement being made. One general practice study which looked at the inter-relationship of organic and psychiatric illness used this method (Kreitman et al. 1966). It is an approach often adopted with some observer rating scales in psychiatric research such as the Present State Examination and the Hamilton Depression Scale.

5. Special investigations: a number of tests nowadays are considered so accurate that a normal finding has been taken as strong evidence of a non-organic condition. Studies which have defined non-organic states in this way

include those of Horrocks & de Dornal (1978) who defined unexplained upper abdominal symptoms on negative endoscopy, Beard et al.(1977) who defined unexplained pelvic pain via negative pelvic laparoscopy, and Bass et al.(1983a and 1983b) who defined unexplained chest pain on normal or near normal coronary angiography.

Methods Used to Exclude Organic Disease in Previous Clinical Studies into Unexplained Physical Symptoms

In chapter 5, a total of 30 previous clinical studies into non-organic physical symptoms will be described and critically discussed, in order to outline the current state of clinical knowledge concerning 'unexplained physical symptoms'. The purpose here is to consider, in light of the discussion in this chapter so far, the methods used to exclude organic disease in these previous studies. In all but four studies (Table 3), this method was either routine clinical diagnosis or was not specified in the paper. Thus, it seems that the issue of carefully excluding organic disease may have been neglected to date by the research in this field. The point should perhaps not be overstated - it is likely that organic disease had been satisfactorily excluded in most studies - in many studies symptom duration was so long that an organic process could be safely ruled out. Some of the studies listed carried out follow-ups. Lewis (1975) traced 98 patients given a diagnosis of hysteria at the Maudsley Hospital 7-12 years earlier - only 3 patients had developed organic disease which might

Table 3. Methods Used to Exclude Organic Disease in
Previous Clinical Studies into Unexplained
Physical Symptoms

Not Specified	Brown (1936)
	Katzenelbogen (1942)
	Kenyon (1964)
	Pilowski (1967)
	Pilowski (1970)
	Bianchi (1971)
	Bianchi (1973)
	Lewis (1975)
	Reed (1975)
	Slavney & Teitelbaum (1985)
	Woodforde & Merskey (1972)
	Chaturvedi et al.(1984)
Routine Clinical Diagnosis by a Physical Specialist	Kreitman et al.(1965)
	Slater (1965)
	Macdonald & Bouchier (1980)
	Wilson-Barnett & Trimble (1985)
	Bradley (1963)
	Elton et al.(1978)
	Mayou (1973)
	Gomez & Dally (1977)
	Hill & Blendis (1967)
	Bouchier & Mason (1979)
	Woodhouse & Bockner (1979)

Table 3 (continued)

Routine Clinical Diagnosis by a Physical Specialist (continued)	Drossman (1982) Feinmann (1983) Blumer & Heilbronn (1982)
Confidence Scores	None
Symptom Profiles	Hudson et al.(1985)
Panel of Specialists	None
Special Investigations	Beard et al.(1977) (pelvic laparoscopy) Bass et al.(1983a) (coronary angiography) Creed (1981) (histology of appendix)

have been connected. In their series of 81 patients with non-organic abdominal pain, Gomez & Dally (1977) found that only one patient developed an organic explanation during a 6 month follow-up.

On the other hand, the famous follow-up study of Slater (1965) revealed that in a significant proportion of patients given a non-organic diagnosis ('hysteria') by neurologists at the National Hospital, Queen Square,

organic disease had developed. It should be pointed out that these diagnoses were made in the early 1950s, a time when the diagnostic facilities of today were not available in neurology. Furthermore, these were routine clinical diagnoses. Had the neurologists been aware that their diagnoses would form part of a research study, they might have acted differently. Another warning comes from the study by Beard et al.(1984) on unexplained pelvic pain. This group had earlier attributed such pelvic pain to psychogenic mechanisms (Beard et al. 1977) but, using a radiological technique not widely available, they demonstrated (Beard et al. 1984) a much higher prevalence of pelvic venous varicosities in women with chronic unexplained pelvic pain than in a comparison group. Of course, these varicosities could form the mechanism mediating psychogenic causes, but as the authors point out, physical causes such as vasoactive substances could not be ruled out.

Finally, we have the literature which refers to uncommon or difficult-to-diagnose organic causes of symptoms. Examples include Sudeck's atrophy and the 'painful legs and toes syndrome' for limb pain (Clough, 1984), spinal stenosis for back pain (Jayson, 1984), and some pancreatic causes of abdominal pain (Foster et al. 1984).

Summary of Chapter 3

The adequate investigation of 'unexplained physical symptoms' demands that organic causes have been confidently excluded. This procedure can in practice be difficult and one author (Reuben, 1984) has called for further research to discover the most reliable methods of differentiating between organic and non-organic symptoms. The issue of carefully excluding organic disease may have been neglected by past research on non-organic physical symptoms, and while the importance of this should not be overstated, it is an issue which should be incorporated into future research. Routine clinical diagnosis is probably not reliable enough for the purpose of carrying out research into 'unexplained physical symptoms'. Other methods which could be considered, in addition to the use of special investigations, are confidence scores, symptom profiles, and panels of specialists.

'Unexplained physical symptoms' have been defined for the purpose of this Thesis as non-organic symptoms not caused by psychiatric illness (see chapter 1). The psychiatric disorders which can produce non-organic symptoms and which must therefore be excluded will be the subject of this chapter. They are listed in Table 4.

Table 4. Psychiatric Disorders Which Can Cause
Non-Organic Physical Symptoms

-
1. Depressive Illness
 2. Anxiety States
 3. Psychogenic Disorders
 - 3.1 Conversion Disorder
 - 3.2 Psychogenic Pain Disorder
 - 3.3 Adjustment Disorder
 4. Somatisation Disorder
 5. Miscellaneous Conditions
 - 5.1 Accident/Compensation Neurosis
 - 5.2 Munchausen Syndrome
 - 5.3 Schizophrenia
 - 5.4 Monosymptomatic Hypochondriacal Psychosis
 - 5.5 Alcoholism
-

1. Depressive Illness

It is well recognised that depressive illness can cause physical symptoms, and that in some cases these physical symptoms predominate. Physical symptoms of several symptom types (see chapter 1, page 15) can occur. Symptoms of the autonomic function type such as anorexia, constipation, and dry mouth, and generalised symptoms such as fatigue and malaise, form part of the classical symptomatology of depressive illness (Katon et al. 1982; Paykel & Norton, 1982). Conversion symptoms of the somatic function type can occur (Ashcroft et al. 1978). And finally, painful symptoms are said to be common. 50%-60% of patients with depressive illness have been shown to have painful symptoms (Merskey, 1965; Von Knorring et al. 1983; Roy, 1984). Pain in depression used to be thought to favour certain body sites such as the head (Lancet, 1984) and the face (Lascelles, 1966), but research now indicates that the site can vary (Von Knorring et al. 1983; Roy, 1984). Unpleasant paraesthesiae have also been described (Lopez-Ibor, 1972).

Physical symptoms have been described as examples of the symptomatology of so-called 'masked depression' (Lopez-Ibor, 1972; Paykel & Norton, 1982), depressive illness in which the depressed mood component is not prominent. The diagnosis of depressive illness is not yet entirely reliable. Valid biological markers based on pathological mechanisms or on aetiology do not yet

exist to help with diagnosis. The diagnosis of masked depressive illness must be even less reliable, so care must be taken not to attribute unexplained physical symptoms too readily to masked depressive illness, especially in research studies. Blumer & Heilbronn (1982 and 1984) have argued that chronic unexplained pain is always a variant of depressive illness, in other words, a form of masked depression. But other authors such as Williams & Spitzer (1982) and Roy (1984) have stated firmly that evidence does not yet exist to support this view.

2. Anxiety States

It is widely accepted that anxiety can cause physical symptoms. Indeed, physical symptoms often contribute to the clinical picture on which the diagnosis of anxiety state is based. The symptoms are mostly of the autonomic function type (Tyrer, 1976). Less commonly, painful symptoms occur such as epigastric discomfort, chest pain, headache, and musculoskeletal pain. The mechanisms underlying the physical symptoms of anxiety are often understood. Symptoms of the autonomic function type are known to result from excess activity of the autonomic nervous system (Hill, 1982), and this mechanism is so widely recognised that the symptoms of autonomic hyperactivity form one of the four categories of symptoms, three of which must be present for a diagnosis of generalised anxiety disorder to be made in DSM-III. Other mechanisms such as skeletal muscle

tension and hyperventilation are suspected of producing some anxiety symptoms (Hill, 1982), but further research is needed to assess their importance. When painful symptoms occur in anxiety, the mechanisms of muscular tension or hyperventilation may be the most likely to be responsible. The only painful symptom included in the criteria for generalised anxiety disorder in DSM-III is epigastric discomfort which is a recognised effect of autonomic hyperactivity on the gut.

As with depressive illness, the diagnosis of anxiety state is not absolutely reliable, so care must be taken not to attribute unexplained physical symptoms to an anxiety state or to muscular tension or hyperventilation without firm evidence.

It is now believed that anxiety symptoms which follow a course of discrete acute episodes represent a separate illness entity which, in DSM-III, is termed panic disorder. The diagnostic criteria for panic disorder are listed in Table 5. The symptom of apprehension or fear is mandatory along with at least 4 symptoms taken from a list of 12, the majority of which are physical symptoms of the autonomic function type. The only painful symptom listed is chest pain. Episodes are said to occur unpredictably and to be not necessarily related to understandable stresses (American Psychiatric Association, 1980).

Table 5. DSM-III Diagnostic Criteria for Panic Disorder

A. At least three panic attacks within a three-week period in circumstances other than during marked physical exertion or in a life-threatening situation. The attacks are not precipitated only by exposure to a circumscribed phobic stimulus.

B. Panic attacks are manifested by discrete periods of apprehension or fear, and at least four of the following symptoms appear during each attack:

1. dyspnoea
2. palpitations
3. chest pain or discomfort
4. choking or smothering sensations
5. dizziness, vertigo, or unsteady feelings
6. feelings of unreality
7. paraesthesias
8. hot and cold flashes
9. sweating 10. faintness
11. trembling or shaking
12. fear of dying, going crazy, or doing something uncontrolled during an attack

C. Not due to a physical disorder or another mental disorder such as major depression, somatisation disorder, or schizophrenia.

D. The disorder is not associated with agoraphobia.

The term panic disorder has not yet gained widespread use in the U.K. but a British review was given by Snaith (1983). Snaith referred to evidence which suggests that endogenous or biogenic factors are more important in causing panic disorder than environmental factors, and he suggested that panic disorder may be related to the affective disorders. A recent American review (Breier et al. 1985) provided evidence supporting an association between panic disorder and depressive illness, but concluded that the nature of this association remains to be clarified. In his article, Snaith (1983) also argued that the diagnosis of panic disorder is often overlooked with the result that patients are physically over-investigated. Snaith also suggested that panic disorder has existed for a long time disguised behind labels such as effort syndrome and cardiac neurosis. Bass & Gardner (1983) challenged this latter assertion, pointing out that entities such as effort syndrome were usually polysymptomatic and that it is too early to ascribe all polysymptomatic conditions of uncertain origin to panic disorder. In other words, panic disorder should not act as the latest convenient label with which to describe all chronic unexplained physical symptoms.

In some individuals verbal expression of the mental/emotional component of anxiety appears to be deficient. This phenomenon has been termed 'alexithymia' and will be described in more detail in chapter 8. These individuals might be expected to present only the

physical manifestations of anxiety (Hill, 1982). No allowance is made for this in the diagnostic criteria for panic disorder and generalised anxiety disorder in DSM-III, which include mental anxiety symptoms as mandatory, although attention has been brought to this possible deficiency, in the case of panic disorder, by Jones (1984) who included an illustrative case-report in his paper.

3. Psychogenic Disorders

3.1 Conversion Disorder

Conversion disorder, the term adopted in DSM-III, is otherwise known as conversion hysteria. In conversion disorder physical symptoms occur which are nearly always of the somatic function type and which are judged to be precipitated or perpetuated by psychological factors. The diagnostic criteria used in DSM-III are given in Table 6. Examples of the most common symptoms are paralysis, aphonia, seizures, disturbance of co-ordination, sensory disturbance, and visual disturbance. Symptoms of the autonomic function type such as vomiting are said sometimes to occur (American Psychiatric Association, 1980). Examples of the psychological processes which can be aetiologically involved include keeping psychological conflicts from conscious thought, avoidance of an unwanted activity, and the gaining of support from the environment which would otherwise not be available.

Table 6. DSM-III Diagnostic Criteria for Conversion
Disorder

A. The predominant disturbance is a loss of or alteration in physical functioning suggesting a physical disorder.

B. Psychological factors are judged to be aetiologically involved in the symptom, as evidenced by one of the following:

1. there is a temporal relationship between an environmental stimulus that is apparently related to a psychological conflict or need and the initiation or exacerbation of the symptom.

2. the symptom enables the individual to avoid some activity that is noxious to him or her.

3. the symptom enables the individual to get support from the environment that otherwise might not be forthcoming.

C. It has been determined that the symptom is not under voluntary control.

D. The symptom cannot, after appropriate investigation, be explained by a known physical disorder or pathophysiological mechanism.

E. The symptom is not limited to pain .

F. Not due to somatisation disorder or schizophrenia

The mechanism which mediates between this psychological aetiology and the physical symptoms in conversion disorder is called dissociation (Merskey, 1978). This is an ill-understood cerebral mechanism which acts subconsciously and which is thought to lead to a split between emotional reactions and physical symptoms.

There is a rich literature on conversion disorder or conversion hysteria which includes some famous names from the history of psychiatry such as Charcot and Freud (Merskey, 1978). However, a great deal of ambiguity is to be found in this literature, especially when the single term 'hysteria' is used. A recent review of conversion disorder is provided by Hyler & Sussman (1984). These authors note that prevalence data for conversion disorder as defined in DSM-III is not available, but comment that many clinicians believe the prevalence to have fallen over the past 50 years. The authors note that conversion symptoms can occur in other mental disorders such as affective disorder, schizophrenia, and somatisation disorder, and that they are more likely to occur in some physical conditions such as multiple sclerosis. Hyler & Sussman therefore urge caution before conversion symptoms are attributed to conversion disorder, and believe that the validity of conversion disorder as a separate disease entity has yet to be established with certainty.

3.2 Psychogenic Pain Disorder

In psychogenic pain disorder (Table 7), severe and prolonged pain, which is inadequately explained by organic disease, is judged to be caused (precipitated or perpetuated) by psychological factors. The diagnostic criteria in DSM-III are very similar to those for conversion disorder, except for the differences in symptom type. In the past, painful symptoms of psychogenic origin have usually been classified within conversion hysteria (Merskey, 1978), and the decision to separate psychogenic pain disorder and conversion disorder in DSM-III has met with some opposition. Bishop & Torch (1979) could not differentiate these two disorders on a large number of clinical variables, although their investigation was a retrospective one based on medical charts and it was based on a population of psychiatric and not general medical patients. The authors of DSM-III acknowledge an association between psychogenic pain disorder and conversion disorder because psychogenic pain disorder is said to be commonly associated with a past history of conversion symptoms (American Psychiatric Association, 1980).

Hyler & Sussman (1984) reviewed psychogenic pain disorder and pointed out that little is known about its prevalence and stated that it is still unclear whether or not it represents a valid disease entity. They say that one reason for this lack of information is that most patients with pain are seen by physicians and not

Table 7. DSM-III Diagnostic Criteria for Psychogenic
Pain Disorder

A. Severe and prolonged pain is the predominant disturbance.

B. The pain presented as a symptom is inconsistent with the anatomic distribution of the nervous system; after extensive evaluation, no organic pathology or pathophysiological mechanism can be found to account for the pain; or, when there is some related organic pathology, the complaint of pain is grossly in excess of what would be expected from the physical findings.

C. Psychological factors are judged to be aetiologically involved in the pain, as evidenced by at least one of the following:

1. a temporal relationship between an environmental stimulus that is apparently related to a psychological conflict or need and the initiation or exacerbation of the pain.

2. the pain's enabling the individual to avoid some activity that is noxious to him or her.

3. the pain's enabling the individual to get support from the environment that otherwise might not be forthcoming.

D. Not due to another mental disorder.

psychiatrists. Another set of authors have suggested that the diagnostic criterion which demands good evidence of psychological aetiology is too restrictive. Williams & Spitzer (1982) proposed omitting this and renaming the condition 'idiopathic pain disorder'. It should be noted that this change would remove, in concept, the disorder altogether from conversion disorder. It would also change the symptoms, in the context of my study, from 'explained' to 'unexplained'.

3.3 Adjustment Disorder

Table 8. DSM-III Diagnostic Criteria for Adjustment Disorder

A. A maladaptive reaction to an identifiable psychosocial stressor, that occurs within three months of the onset of the stressor.

B. The maladaptive nature of the reaction is indicated by either of the following:

1. impairment in occupational or social functioning.
2. symptoms that are in excess of a normal and expectable reaction to the stressor.

C. The disturbance is not merely one instance of a pattern of over-reaction to stress or an exacerbation of one of the mental disorders previously described.

The essential feature of adjustment disorder (Table 8) is a maladaptive reaction to an identifiable psychosocial stressor.

DSM-III subdivides adjustment disorder into subtypes, including 'adjustment disorder with anxious mood' and 'adjustment disorder with depressed mood'. Thus, physical symptoms of the types caused by anxiety or depression, which were discussed earlier in this chapter, could arise. There has been no systematic research to my knowledge on the physical symptomatology of adjustment disorder.

Adjustment disorder can describe an inappropriate psychological reaction to physical illness (American Psychiatric Association, 1980). Physical illness presumably can refer here to disorders of organic and non-organic origin. Thus, it is theoretically possible for physical symptoms to start as an acute physical illness but to be perpetuated, in similar or different forms, by an adjustment disorder.

4. Somatisation Disorder

In somatisation disorder a pattern of recurrent and multiple physical complaints commences before the age of 30 and follows a chronic fluctuating course. It has been described almost exclusively in the U.S.A. Before qualifying, each physical complaint must have reached a

certain level of severity and must have been judged by a physician to be not adequately explained by organic disease (Table 9). The list of symptoms necessary for the diagnosis is based on a lifetime history and each individual symptom need not be of several years duration (Murphy, 1982). The diagnostic criteria in DSM-III do not make these points clearly.

Somatisation disorder is a modification of Briquet's syndrome or St Louis hysteria. The latter was first described by a group of psychiatrists in St Louis, U.S.A. (Perley & Guze, 1962), and it is from their centre that most publications have emanated. Briquet's syndrome was named after the French physician of that name who described a similar syndrome. The diagnostic criteria for Briquet's syndrome used by the St Louis group (Murphy, 1982) are more exacting than those used in DSM-III for somatisation disorder - 25 symptoms are required (v 14) from a symptom list of 60 (v 37) and these must be distributed across 9 symptom groups (not necessary for somatisation disorder) - in addition, a 'dramatic, complex medical history' is required. The simplification of the diagnostic criteria adopted in DSM-III for somatisation disorder was based on an analysis carried out on St Louis data (DeSouza & Othmer, 1984). DeSouza & Othmer (1984) demonstrated in a retrospective study of 85 psychiatric referrals that the diagnostic criteria for somatisation disorder and Briquet's syndrome identify the same patients and

Table 9. DSM-III Diagnostic Criteria for Somatisation Disorder

A. A history of physical symptoms of several years' duration beginning before the age of 30.

B. Complaints of at least 14 symptoms for women and 12 for men, from the 37 symptoms listed below. To count a symptom as present the individual must report that the symptom caused him or her to take a medicine (other than aspirin), alter his or her life pattern, or see a physician. The symptoms, in the judgement of the clinician, are not adequately explained by physical disorder or physical injury, and are not side effects of medication, drugs or alcohol. The clinician need not be convinced that the symptom was actually present, e.g., that the individual actually vomited throughout her entire pregnancy; report of the symptom by the individual is sufficient.

Sickly: believes that he or she has been sickly for a good part of his or her life.

Conversion or pseudoneurological symptoms: difficulty swallowing, loss of voice, deafness, double vision, blurred vision, blindness, fainting or loss of consciousness, memory loss, seizures or convulsions, trouble walking, paralysis or muscle weakness, urinary retention or difficulty urinating.

Table 9 (continued)

Gastrointestinal symptoms: abdominal pain, nausea, vomiting spells (other than during pregnancy), bloating (gassy), intolerance (e.g., gets sick) of a variety of foods, diarrhoea.

Female reproductive symptoms: judged by the individual as occurring more frequently or severely than in most women: painful menstruation, menstrual irregularity, excessive bleeding, severe vomiting throughout pregnancy or causing hospitalisation during pregnancy.

Psychosexual symptoms: for the major part of the individual's life after opportunities for sexual activity: sexual indifference, lack of pleasure during intercourse, pain during intercourse.

Pain: pain in back, joints, extremities, genital area (other than during intercourse); pain on urination; other pain (other than headaches).

Cardiopulmonary symptoms: shortness of breath, palpitations, chest pain, dizziness.

recommended using the criteria for somatisation disorder because they are less cumbersome and time-consuming.

DeSouza & Othmer (1984) based their diagnosis of somatisation disorder on a single interview, but Murphy (1982), a member of the St Louis group, advised cross-checking with previous medical records where possible. It seems a remarkable achievement to obtain accurate information at one interview on a checklist of 37 symptoms covering the period from early adult life, establishing that those present had been of a minimal level of severity (see Table 9), and that they had not been judged to have adequate organic explanations by the physicians involved. It seems just as remarkable an achievement to succeed in obtaining all previous medical records and to find that these contain sufficient information on which to rate symptoms. Yet the St Louis group have claimed that the diagnosis is reliable and that it is stable over time (Woodruff et al. 1971).

This stable course over time is presented as evidence in favour of a valid disease entity. Further evidence of validity is said to be provided by genetic data which has shown an increased prevalence of 'St Louis hysteria' among first-degree female relatives of patients given this diagnosis (Woerner & Guze, 1968; Coryell, 1980). This evidence in total led Hyler & Sussman (1984) to conclude, in their recent review of the Somatoform Disorders, that "somatisation disorder is the most reliably diagnosed and probably represents a valid

diagnostic entity".

Patients with somatisation disorder are almost exclusively female and they tend to have the following associated features (Monson & Smith, 1983; American Psychiatric Association, 1980): an excessive number of surgical procedures; psychiatric complaints; a history of suicide threats; occupational difficulties; marital discord; and antisocial behaviour. Some indirect evidence in support of some of these findings came from a study of Swedish adoptees which was based on national sick-leave records. Sigvardsson et al.(1984), Cloninger et al.(1984), and Bohman et al.(1984) identified two groups of 'somatisers' among women. 'High frequency somatisers' had the highest frequency of sick leaves for somatic complaints which were especially likely to involve the abdomen or back. These women also had a high frequency of psychiatric complaints. 'Diversiform somatisers' had a lesser frequency of sick leaves but the somatic complaints were more diverse. Statistical analysis was said to indicate that these two groupings were discrete. 'High frequency somatisers' were regarded by the authors as being close to the concept of somatisation disorder. These women were found to have increased rates of alcohol abuse and criminality. The biological fathers of 'high frequency somatisers' had increased rates of violent crime but not of alcoholism. The biological fathers of 'diversiform somatisers' were more likely to have male-limited alcoholism, the type of alcoholism said by the authors to show inheritance from

father to son but not from father to daughter. These genetic differences were offered as further evidence of validity for the two groups. Thus, evidence of genetic links between sociopathy, alcoholism, and somatisation disorder is provided, something previously demonstrated (Woerner & Guze, 1968), although the Swedish group were careful to emphasise the crudity of their data source and called for more research.

The validity of somatisation disorder has been questioned in the U.K. and one set of authors (Bass & Gardner, 1985) have described it as a "clinical entity of dubious validity characterised by a conspicuous lack of positive diagnostic features". However, little research on somatisation disorder or even on recurrent, multiple, non-organic complainers has been carried out in this country. Hyler & Sussman (1984) accepted that somatisation disorder is probably a valid entity but they were careful to use the phrase 'valid diagnostic entity' rather than valid disease entity. The St Louis group have always regarded somatisation disorder as an independent disease (Murphy, 1982). Hyler & Sussman (1984) suggested that somatisation disorder may be a form of personality disorder rather than a disease.

Further research seems necessary but the amount of data available from the U.S.A. does suggest that somatisation disorder is a valid entity of some sort. Even if it was to be confirmed as a valid diagnostic entity, somatisation disorder should not necessarily be

regarded as providing an 'explanation' for physical symptoms, because little is known about pathological mechanisms and aetiology. The St Louis group consider a genetic contribution to aetiology to be important (Murphy, 1982), and this is supported by data from the Swedish group (Bohman et al. 1984), but this requires further confirmation, and many environmental factors have not yet been studied, including the possible iatrogenic influences of the medical care system.

5. Miscellaneous Conditions

5.1 Accident/Compensation Neurosis

In compensation neurosis non-organic physical symptoms persist following an accident for which there is an unsettled claim for financial compensation. It is assumed that perpetuation of the symptoms is caused by behavioural reinforcement arising from the need to retain some disability in order to pursue the compensation claim. Accident/compensation neurosis was first given prominence by Henry Miller (1961). Miller concluded that settlement of the compensation claim usually led to symptom resolution. In a review by Reed (1978) the author suspected that the adversarial system of legal proceedings in the U.K. for such compensation claims contributed to the persistence and severity of symptoms. In a recent review, Tarsh & Royston (1985) challenged the view that symptom resolution often follows legal settlement. Their opinion that prognosis tends to be

poor regardless of legal outcome was based on an up-to-date literature review and on the follow-up of 35 of their own cases. In agreement with Reed (1978) these authors also suspected that the legal process, which had lasted several years in most of their cases, contributed to symptom perpetuation, and they concluded by supporting the sort of 'no fault' compensation system recommended by the Pearson Commission in 1978. In their sample, Tarsh & Royston (1985) also suspected that family factors contributed to symptom perpetuation - that role changes within some of the families, revolving around the symptomatic individual, became entrenched with the passage of time.

In most cases of compensation neurosis, the reinforcing influence of the outstanding claim would qualify as an aetiological psychological factor so that, depending on symptom type, DSM-III criteria would be met for psychogenic pain disorder or conversion disorder. To reduce multiplicity of terms it might be preferable to use these DSM-III terms in compensation cases. This action would be further supported if behavioural influences other than the outstanding claim were thought to be contributing - for example, the influence of family members as described by Tarsh & Royston (1985).

5.2 Munchausen Syndrome

This diagnosis may be applied to patients who present repeatedly with physical symptoms to different doctors

and hospitals which are usually geographically widespread. These patients usually lie about their previous medical history. The symptoms are apparently under voluntary control but the gain obtained by the individual is seldom understandable. This voluntary control differentiates the syndrome from conversion disorder and psychogenic pain disorder, and the lack of understandable gain differentiates it from frank malingering. In DSM-III the syndrome is termed chronic factitious disorder. There is little information on prevalence and no real understanding of the underlying psychopathological mechanisms and aetiology (Reed, 1978; American Psychiatric Association, 1980).

5.3 Schizophrenia

Schizophrenia can be included in the psychiatric differential diagnosis of non-organic physical symptoms (Gelder et al. 1983). Symptoms of the types found in anxiety and depression can occur, and somatic complaints can form the content of delusions and hallucinations.

5.4 Monosymptomatic Hypochondriacal Psychosis

This term has been applied to a separate syndrome (Munro, 1980) in which there is a single incorrect belief about physical health which is held with conviction. The best examples are dysmorphophobia in which there is an incorrect or excessive belief that some aspect of physical appearance is unsightly, and parasitophobia in

which there is a belief of being infested with insects. These abnormal beliefs are often referred to as delusions, but McKenna (1984) suggested that they are better viewed as over-valued ideas. McKenna described these phenomena as always occurring in other disorders, and did not appear to regard monosymptomatic hypochondriacal psychosis as a separate syndrome.

5.5 Alcoholism

Alcoholism should be considered as a possible occult cause of physical symptoms within the psychiatric differential diagnosis (Gelder et al. 1983), although alcoholism actually represents an organic explanation. Examples of symptoms include abdominal pain and vomiting from gastritis, pain and paraesthesiae from peripheral neuropathy.

Summary of Chapter 4

A number of psychiatric disorders need to be considered when non-organic physical symptoms are met. The most common are probably depressive illness and anxiety states, although improved diagnostic reliability is required before the precise role of these disorders is understood. In the meantime care should be taken not to attribute non-organic symptoms too readily to depression and anxiety. Conversion disorder and psychogenic pain disorder can be diagnosed when symptoms are precipitated or perpetuated psychologically, although these disorders remain to be fully validated (Hyler & Sussman, 1984). The mechanisms underlying symptom precipitation and symptom perpetuation may be different in these disorders. It is believed that symptoms of the somatic function type as found in conversion disorder can be precipitated psychologically via the mechanism of dissociation (Merskey, 1978), but it is not clear whether pain can be precipitated by this mechanism. Symptom perpetuation is mostly produced by behavioural reinforcement. This has been most widely described in chronic pain. Fordyce (1978) referred to the behavioural component of pain which includes verbal reports, grimacing, restriction of normal activities, and taking medicines, and states that pain behaviour, like any behaviour, is prone to reinforcement. It seems likely that such reinforced behaviour could become entrenched with the passage of time, something that was suspected by Tarsh & Royston

(1985) following their follow-up study of cases diagnosed to have accident neurosis. One set of authors (Williams & Spitzer, 1982) have found difficulty in establishing psychological causes in many cases of chronic non-organic pain, and have proposed that all such cases are classed under the diagnostic term 'idiopathic pain disorder' which would then replace psychogenic pain disorder.

Somatisation disorder is an interesting condition which has been described mostly in the U.S.A. Out of all the psychiatric disorders described in this chapter, somatisation disorder is the one which cannot be regarded with certainty as providing a 'psychiatric explanation' for non-organic physical symptoms, because information about underlying pathological mechanisms and aetiology is so scanty. Nevertheless, evidence available suggests that further research is warranted.

Other psychiatric causes of non-organic physical symptoms are accident neurosis, which could be classified as conversion disorder or psychogenic pain disorder; Munchausen syndrome, which might represent the extreme end of somatisation disorder; adjustment disorder; schizophrenia; monosymptomatic hypochondriacal psychosis; and alcoholism.

Few previous investigations have focused on 'unexplained physical symptoms' as defined by myself, namely, non-organic physical symptoms for which psychiatric causes have been excluded. Current thinking tends to view non-organic physical symptoms as 'psychiatric' in explanation despite, in my opinion, a lack of evidence to support this. This approach is found in current textbooks of psychiatry such as Oxford Textbook of Psychiatry (Gelder et al. 1983), Essentials of Postgraduate Psychiatry (Hill et al. 1979), and Comprehensive Textbook of Psychiatry (Kaplan et al. 1980), one textbook of liaison psychiatry (Creed & Pfeffer, 1982, chapter 7), and at least one textbook of medicine, Harrison's Principles of Internal Medicine (Isselbacher et al. 1980).

In order to review current clinical knowledge about 'unexplained physical symptoms', it was necessary to examine the literature on non-organic physical symptoms in general, symptoms which, on my model, would be expected to include those with 'psychiatric explanations' and 'unexplained' symptoms. I was particularly interested in the amount of clinical descriptive data published in previous papers, because the lack of such existing data had been emphasised in a recent major review in this field by Barsky & Klerman (1983). I had

already surmised that clinical variables whose description could be worthwhile and could aid attempts to improve syndromal classification of 'unexplained physical symptoms' include symptom type, symptom course, symptom duration, symptom severity, nature of onset, and past history of frequent non-organic medical consultations.

In addition to the literature which has examined non-organic symptoms, I decided to include in this chapter the literature on hypochondriasis and some of the literature on hysteria. This was done for three reasons. Firstly, an examination of this literature indicated that non-organic physical symptoms had often been investigated, even although authors used the above terms. Secondly, this literature has been influential in the attempts to understand puzzling physical symptomatology, and is still widely quoted today. Thirdly, the validity of these two conditions as separate illness entities has now been virtually rejected (Hyler & Sussman, 1984).

This chapter will be subdivided into two sections, one on hypochondriasis and hysteria, and one on non-organic symptoms, and each section will be further subdivided into clinical studies and review articles. The literature in this chapter is discussed with the reservations in mind about the adequate exclusion of organic disease already discussed in chapter 3.

Section 1.a. Clinical Studies on 'Hypochondriasis' and
 'Hysteria

The clinical studies which will be discussed in this section are listed in Table 10.

Table 10. Previous Clinical Studies on Hypochondriasis
 and Hysteria

Brown (1936)
Katzenelbogen (1942)
Kenyon (1964)
Kreitman et al.(1965)
Pilowski (1967)
Pilowski (1970)
Bianchi (1971)
Bianchi (1973)
Lewis (1975)
Reed (1975)
Slater (1965)

Hypochondriasis

Hypochondriasis is defined in ICD-9 as '...excessive concern with one's health in general or the integrity and functioning of some part of the body...'. Thus, physical symptoms need not even be present to fulfill this definition. Physical symptoms are alluded to in

the definition of hypochondriasis in DSM-III - '...an unrealistic interpretation of physical signs or sensations as abnormal, leading to preoccupation with the fear or belief of having a serious disease'. Despite the doubts about its independent status (see Hyler & Sussman, 1984) and despite its ambiguity of meaning, the term hypochondriasis is still commonly used today. It was used by Barsky & Klerman (1983) in their recent review of unexplained physical symptoms, and in 1985 formed the title of a scientific session at the Annual Meeting of the Royal College of Psychiatrists.

The term hypochondriasis seems to have been used in the past in four principal ways. One is to describe all unexplained physical symptoms, but the other three all describe psychological phenomena - fear of having a serious illness, mental preoccupation with symptoms and their significance, and conviction that serious illness is present despite medical reassurance. These three phenomena can co-exist, and all three are included in the DSM-III definition of hypochondriasis, but they are essentially separate phenomenon.

Felix Brown (1936) defined hypochondriasis simply as 'physically unjustified or exaggerated bodily complaints'. He described a series of 41 patients who had been admitted to the Phipps Psychiatric Clinic in the U.S.A., so his study was based on psychiatric inpatients. Brown devised the following psychiatric classification for 'physically unjustified or exaggerated bodily

complaints' on the basis of his study: 1a. anxiety state, the physiological accompaniments 1b. conversion symptoms 1c. over-dramatisation with underlying purposiveness 2. schizophrenia 3. depressive illness.

Katzenelbogen (1942) described another series of patients, 51 in total, from the Phipps Psychiatric Clinic. He did not use the definition of Brown (1936), his predecessor, but instead defined hypochondriasis as a preoccupation with bodily health with or without accompanying physical symptoms. He selected his series on the basis of this definition, but details of the selection process were not published. Despite the broad definition used, Katzenelbogen's patients almost all did have physical symptoms and these were usually numerous and diverse. The author proceeded to examine personality and environmental stresses, but did not publish detailed descriptive data on symptomatology.

In a well-known study Kenyon (1964) investigated hypochondriasis by tracing case-notes at the Bethlem Royal and Maudsley Hospitals of all patients in whom a diagnosis of hypochondriasis had been recorded between 1951 and 1960, and comparing those in whom the diagnosis was primary and those in whom it was secondary to another psychiatric illness. The total sample was 512 but most of the analysis was done on the 295 inpatients, 118 of whom were designated 'primary hypochondriasis'. Almost all patients with both primary and secondary hypochondriasis had physical symptoms, most commonly

pain. Some descriptive data was published - on symptom site, symptom duration, and symptom course - but was not used to classify patient subgroups. Even in the primary hypochondriasis group, 30% had past histories of affective illness, and 42% had positive family psychiatric histories, suggesting that in this group psychiatric illness was often present which could have provided explanations for the physical symptoms. This is supported by the fact that 50% of the primary hypochondriasis group had received E.C.T. or drug therapy. However, no attempt was made to separately analyse patients with probable psychiatric explanations for physical symptoms from those without.

The study lead Kenyon to conclude that hypochondriasis does not form a nosological entity, but is rather part of another syndrome, most commonly an affective one. Interestingly, this is the view of many writers in the 1980s (for example, Hyler & Sussman, 1984), but in some respects Kenyon's conclusion might have been unfortunate. The main patient sample was of psychiatric inpatients so was not representative of physical symptomatic patients in general. Secondly, defined selection criteria were not used, the routine clinical diagnosis of hypochondriasis made by psychiatrists in the 1950s being used instead, so one does not know precisely what kinds of cases were included. Kenyon's conclusion may have encouraged psychiatrists and others to regard unexplained physical symptoms in whatever setting to be affective in origin, but this was not what Kenyon demonstrated.

Kreitman et al.(1965) did obtain their sample of 'hypochondriasis' at a general hospital. This group established a special research clinic there and invited referrals of patients 'with persistent somatic complaints not adequately accounted for by their clinical investigations, or who were considered to be hypochondriacs'. 120 referrals were received in two years, but unfortunately the authors only published details on the 21 in whom depressive illness was confidently diagnosed, so the paper is relevant to masked depressive illness rather than unexplained physical symptoms. Data on the other 99 referrals were never published (Dr Kreitman, personal communication, 1985) because of the difficulties in reaching clear decisions about diagnosis. This suggests that the group were seeking psychiatric explanations for their study patients, rather than trying to classify the whole sample, for example, in terms of clinical variables such as symptom type, symptom course, symptom duration, symptom severity, etc.

Pilowski (1967) used psychiatric patients only in his investigation of hypochondriasis. He defined hypochondriasis as 'a persistent preoccupation with disease despite reassurance given after thorough medical examination', adding that 'neither the nature or the number of (physical) symptoms were considered the major features in the diagnosis of hypochondriasis'. Pilowski devised a 14-item questionnaire (the Whitely Index)

designed to measure hypochondriasis. He applied this to 200 psychiatric patients, 100 of whom 'had been diagnosed as manifesting hypochondriacal features' (as defined above) and 100 of whom had not. Details of primary diagnosis for these 200 patients were not published. It is accordingly not known how many, if any, had unexplained physical symptoms. The Whitely Index was found to discriminate between the two samples. Factor analysis was carried out on the Whitely Index data for the complete sample of 200 patients and three important factors were found which accounted for 54% of the variance. These factors were termed by Pilowski, 'Bodily Preoccupation', 'Disease Phobia', and 'Conviction of the Presence of Disease with Non-Response to Reassurance', and the author presented these as three 'dimensions' of hypochondriasis.

This study can be criticised in many respects. The Whitely Index was devised in a rather random way and its wording does not make it clear whether the items refer to trait attitudes or current attitudes. Not only was the study carried out on psychiatric patients only, these were patients of mixed psychiatric diagnoses. Given this unsatisfactory patient sample and a questionnaire of unproven validity, the author's three 'dimensions' of hypochondriasis cannot be regarded as a strong finding. Even if the findings had carried greater validity, it is difficult to agree with Pilowski's conclusion that hypochondriasis is a discrete entity, given the diverse nature of the three 'dimensions'. Finally, the author

made no attempt to classify his patients in terms of physical symptom variables.

In a later study Pilowski (1970) attempted to replicate the work of Kenyon (1964) by comparing samples of patients with 'primary hypochondriasis' and 'secondary hypochondriasis'. As with his previous study hypochondriasis was defined as a preoccupation with health or disease unjustified by the amount of organic pathology present and not responding to reassurance. Although the presence of physical symptoms was not necessary to meet this definition, it appears from the paper that they were experienced by every patient in the sample of 147. The author collected his series during his routine clinical work as a psychiatrist. So, the sample was once again handicapped by being confined to psychiatric patients and furthermore, no indications were published as to the representativeness of the sample even within psychiatry. 66 patients were designated 'primary hypochondriasis'. The remainder were called 'secondary hypochondriasis' and almost all were diagnosed to have depressive illness or anxiety neurosis. Diagnostic evaluation was carried out by the author alone in a non-standardised way. A number of differences emerged between the two samples - the patients with primary hypochondriasis tended to have longer histories, less previous psychiatric history, and to be less likely to receive antidepressant treatment. Pilowski concluded that "hypochondriasis may be usefully regarded as an independent syndrome".

It is not possible to establish the nature of Pilowski's sample of patients with 'primary hypochondriasis' - some may have had 'unexplained physical symptoms' as defined by myself - but many probably had masked psychiatric illness, albeit less severe than in the 'secondary hypochondriasis' group. The author's conclusion that hypochondriasis can be regarded as an independent syndrome is not strongly supported by the data published, and is confounded by weak methodology.

Bianchi (1971) investigated disease phobia, calling this a variant of hypochondriasis. In fact, he defined disease phobia along similar lines to previous definitions of hypochondriasis - 'a persistent, unfounded fear of suffering from a disease, with some doubt remaining despite examination and reassurance'. The choice of the word 'phobia' rather than 'fear' was perhaps unfortunate, although was based on the phobia literature (Marks, 1969), because phobias usually consist of intense fears of external situations which can if necessary be avoided, and this cannot apply to disease in oneself. In common with the studies mentioned so far, patient sampling in Bianchi's study was not satisfactory, being derived from a large sample of psychiatric inpatients who were participating in a separate study of depressive illness. Indeed, 50% of Bianchi's sample of 30 patients with disease phobia were given a diagnosis of depressive illness. Almost all patients had physical

symptoms. The author compared these 30 patients with 30 matched inpatients who did not display disease phobia, comparing clinical variables along with measures of sensation threshold and pain tolerance using an electrical stimulation method.

Thus, Bianchi inflated to a syndrome, a symptom (disease phobia) which in many of his patients would have been a recognised effect of another psychiatric disorder. Despite this very unsound methodology, Bianchi used his data to elaborate a complex theory of the aetiology of 'disease phobia', involving the interaction of low sensation threshold, previous family illness, and current anxiety. He also reached a whole variety of other conclusions, and even suggested that his study was "relevant to disease phobia beyond its purely psychiatric context. Intuitively, the findings are germane to the consideration of why people, sick or not, have particular disease fears and phobias".

Using a similar approach to that of Pilowski (1967), Bianchi (1973) applied a principal components analysis to some of the data collected from the same study. Out of the 235 psychiatric patients who were taking part in the depressive illness study, 118 (excluding schizophrenia and organic brain disease) had at least one of the following symptoms - disease phobia, disease conviction, somatic preoccupation, psychogenic pain - and were studied further. The primary diagnoses in these 118 patients were not published, but was presumably

depressive illness in a large proportion. Of the many clinical and psychophysiological variables gathered only 24 were selected for the principal components analysis. The method by which these particular 24 were chosen is not made clear. Eight components emerged from this analysis. The variance explained by each ranged from 10.8% to 6.6%, and the total variance explained by all 8 components was 63.8%. Remarkably, the author concluded by describing 7 of these 8 statistical components as "dimensions" of hypochondriasis, although none of the components appear to me to have much clinical meaning.

Fear of illness has formed an important part of the definition of hypochondriasis in most of the studies quoted so far. In a very interesting study, Agras et al.(1969) examined the prevalence of illness fear in a general population sample in the U.S.A. as part of a large survey of fears and phobias. Fears were classified as common fears, intense fears, and phobias. Unfortunately, a precise definition for phobia was not published - 'standard clinical definitions were used' - but the presence of phobia did require the agreement of two psychiatrists. The most prevalent common fear was of snakes at 390/1000, while illness fear had a rate of 165/1000. Fear of snakes was also the most common intense fear at 253/1000; illness dropped sharply to 33/1000. The prevalence of phobia was much less but illness (combined with injury) was at the top at 31/1000. However, most phobias were mild - only 3% were described as severely disabling, and only 12% had ever received

treatment. The authors concluded that 'phobia' in the community runs a mild but chronic course. The authors did not appear to consider whether the phobias they found could have sometimes been regarded as traits of personality rather than illness. Nor did they publish data on whether the subjects with illness fears and phobias had concomitant physical symptoms which, if present, might have led to these fears and phobias. Nevertheless, the study demonstrated a large reservoir of illness fear in the community. One could postulate that, if affected individuals were to develop a disorder such as depressive illness or one consisting of 'unexplained physical symptoms', then illness fear would be a more likely part of the clinical picture.

Hysteria

Like hypochondriasis, the term hysteria has attracted much controversy and ambiguity over the years. The term can be confined to discrete entities such as those represented by conversion disorder and somatisation disorder in DSM-III, but in the past it has often been used in a more global way to describe physical symptoms unexplained by organic disease.

Sir Aubrey Lewis (1975) examined the validity and uniformity of hysteria by attempting to trace 7-12 years later all patients in whom this diagnosis had been made at the Maudsley Hospital over a 5 year period. Patient

selection was thus based on routine clinical diagnoses and no definition of hysteria was adopted. 98 patients were traced and of these, 54 were asymptomatic, 11 much better, 16 had similar psychiatric illness to that 7-12 years earlier, and 10 had worsened. Commenting on those with residual psychiatric illness, Lewis concluded that in very few did the question of altered diagnosis raise itself and suggested that, for pragmatic reasons at least, 'hysteria' had a usefulness. However, he did make the surprising statement that any alteration in diagnosis would not have amounted to more than 'depressive hypochondriasis' or 'unstable, maladjusted personality', suggesting that, in this paper at least, Lewis was not concerned with diagnostic exactness.

Reed (1975) carried out a similar study by examining the case-notes of all patients given a diagnosis of hysteria at the professorial unit of the Maudsley Hospital between 1949 and 1964 and tracing as many of the patients as possible. Reed pointed out that during this period ICD included the category 'Hysteria Not Otherwise Specified', a category dropped after 1969. 35% of his sample of 120 had been given this diagnosis. Re-examination of case-notes along with the follow-up data produced evidence of a wide range of medical disorders - conversion disorder, dissociation disorder, affective illness, schizophrenia, agoraphobia, over-dramatised symptom presentations, and undiagnosed organic disease. Reed admitted that his study "supports the view of those who consider that hysteria is not a

disease...". Nevertheless, he pointed to 13% of his sample who had conversion or dissociation symptoms only at the original admission and in whom follow-up did not alter the diagnosis. These are patients who would probably be defined in DSM-III as having conversion disorder and dissociation disorder.

Reed's finding that the term hysteria had been used in situations of diagnostic error was the same as that of Slater (1965) except that Slater studied patients in the neurological setting. In this study follow-up showed that many patients had developed organic or other psychiatric illnesses which could have accounted for the initial physical symptoms.

The studies of Slater (1965) and Reed (1975) show beyond doubt that 'hysteria' cannot be applied in a global way to patients with unexplained physical symptoms. Unfortunately, one unwanted effect of their findings could have been to discourage physicians, surgeons, and psychiatrists from adopting an 'unexplained' category for physical symptoms, but instead make them strive to reach some sort of organic or psychiatric diagnosis.

Section 1.b. Review Articles on 'Hypochondriasis' and
'Hysteria'

This literature will be reviewed selectively. There has been extensive writing on hypochondriasis over several centuries and this was summarised in a historical review by Kenyon (1965). One interesting paper quoted by Kenyon was that of Leonhard (1961), a psychiatrist from Berlin. Leonhard clearly regarded hypochondriasis as a discrete clinical entity, but unlike many authors of his time, he recognised the importance of the presence of actual physical symptoms. So, patients with physical symptoms as well as fear of illness were said to have 'sensohypochondria', patients with illness fear only, 'ideohypochondria'. Leonhard illustrated his paper with several case histories, but he did not present scientific data. He believed that there were two important influences on the genesis of hypochondriasis - an obsessional personality prone to brooding and stressful life events.

A focus on recent years could start with the review by Kenyon (1976) entitled 'Hypochondriacal states'. In this review Kenyon concluded that "it now seems best to drop altogether the terms hypochondria and hypochondriasis, but to retain hypochondriacal as a descriptive adjective...hypochondriacal traits, hypochondriacal symptoms, and so on...". Nevertheless,

by reviewing social and cultural factors, measurement issues, psychopathology, and clinical aspects of 'hypochondriacal states', Kenyon appears to elevate hypochondriasis to a higher status than simply a descriptive adjective.

In a review entitled 'Hypochondriacal neurosis', McCranie (1979) described in rather dogmatic terms the typical hypochondriacal patient - such a patient tends to use medical terms to describe his symptoms, if told there is nothing wrong he feels disappointed, he probably had sought a diagnosis as a medical sanction for a sick-role type of adjustment - the author proposed that the somatic symptom serves as a symbolic representation of low self-esteem. This article is written in the form of opinion by a professor of psychiatry from the U.S.A. In his paper McCranie referred to psychoanalytically derived hypotheses and these are described elsewhere in the recent American literature. Brown & Vaillant (1981) defined hypochondriasis as the "transformation of reproach towards others arising from bereavement, loneliness, or unacceptable aggressive impulses into first self-reproach and then complaints to others of pain or somatic illness". The authors provided no scientific data to support this definition but used it to review the management of hypochondriasis. Aldrich (1981) and Adler (1981) used yet different definitions of hypochondriasis in their reviews, namely, patients who attend physicians with insistent physical complaints for which there are no demonstrable organic findings.

In an extensive review entitled 'Overview: hypochondriasis, bodily complaints, and somatic styles', Barsky & Klerman (1983) first commented on the ambiguity and confusion surrounding the term hypochondriasis and then commented on the dearth of data derived from systematic clinical studies. The authors proceeded to review the literature by considering 'four alternative conceptualisations of hypochondriasis' - (i) psychiatric disorder, (ii) psychodynamic, (iii) neuropsychological, (iv) learned behaviour. The review of hypochondriasis as a psychiatric disorder was based predominantly on the literature I have already discussed in Section 1.a. of this chapter. Two psychodynamic concepts of hypochondriasis were reviewed - one hypothesises an alternative channel for sexual and aggressive drives and had its origins in Freud, and the other describes an ego defence against low self-esteem or guilt and originated in Sullivan. The neuropsychological concepts reviewed by Barsky & Klerman were of three types - reduced sensory or pain threshold, a cognitive abnormality which tends to misattribute normal bodily sensations to disease, and impaired capacity to experience fantasy and emotion (alexithymia, see chapter 8) associated with the expression of distress via physical symptoms. Hypochondriasis as learned behaviour was described as symptoms which are perpetuated by reinforcement.

These authors are to be applauded for taking such a broad approach, but their review can be criticised on two

counts. Firstly, their interpretations of previous literature were probably too confident, given the diverse ways in which hypochondriasis has been defined, a point the authors themselves emphasised. Secondly, their use of the term 'hypochondriasis' throughout the paper appears to give the term more status than it deserves, because the authors concluded that "rather than deliberating whether or not the label 'hypochondriasis' can be accurately affixed to a particular patient, the physician might more fruitfully proceed by assessing the patient on four axes", these four axes being the four 'conceptualisations' which formed the basis of their paper. An important conclusion was a call for more research, to include descriptive studies of patients in general medical settings.

In their review of the DSM-III Somatoform Disorders, Hyler & Sussman (1984) also reviewed the literature on hypochondriasis. These authors were quite blunt in their conclusion - "there are as yet no studies that provide support for the DSM-III conceptualisation of this disorder". Hyler & Sussman accepted that the term 'hypochondriacal' can be applied to a symptom, and this echoed the earlier conclusion of Kenyon (1976). This point was perhaps made most elegantly by Hoenig (1984) when he stated that 'hypochondriasis' always refers in a descriptive way to the content of an experience and not to its form. It is form which leads to diagnosis and examples of form given by Hoenig included anxiety, obsession, over-valued idea, and delusion.

Hypochondriacal content was said by Hoenig to consist of a "fearful preoccupation with health".

Even if the term 'hypochondriacal' was to be retained as a descriptive adjective, agreement would be needed on an unambiguous definition. Hoenig's phrase "fearful preoccupation with health" contains two variables - preoccupation with possible illness, and fear of illness. The former is how hypochondriasis is defined in the present 9th edition of the Present State Examination, and the latter is how it is proposed it will be defined in the next edition (Wing, 1983). Further difficulties might arise if support was to grow for the idea of defining hypochondriasis as an illness phobic state (see Wing, 1983 and Hoenig, 1984). Although Marks (1969) used the term 'illness phobia' in his monograph on phobic states, he did emphasise that further systematic study of illness phobia was awaited.

McKenna (1984) rejected illness phobia as a conceptualisation of hypochondriasis, and used yet another definition in his article on disorders with over-valued ideas - "the phenomenology of hypochondriasis is distinguished chiefly by a preoccupying conviction that disease is present...". He suggested that hypochondriasis be defined in terms of over-valued ideas.

The only review article on hysteria which will be mentioned is that of Merskey (1978). In this review the author compiled a remarkably wide-ranging classification

of hysterical phenomena - conversion, dissociation, polysymptomatic conditions ("especially hypochondriasis and Briquet's syndrome"), elaboration of organic complaints, self-induced illness such as anorexia nervosa, psychoses of uncertain origin, "hysterical personality", and "epidemic hysteria".

A considerable amount of psychiatric literature has indirectly examined the clinical features of disorders consisting of 'unexplained physical symptoms' by investigating entities called hypochondriasis and hysteria. Much can be learned from this literature, especially when trying to undertake the task of developing conceptualisations of 'unexplained physical symptoms'. However, this literature has not been very successful in producing valid scientific data for the following reasons. Firstly, both hypochondriasis and hysteria have either been defined in varying ways, or not defined at all in studies where routine clinical diagnoses were used. Four main definitions are to be found for hypochondriasis - all unexplained physical symptoms; fear of having a serious illness; mental preoccupation with symptoms and their significance; and conviction that serious illness is present despite medical reassurance. An even wider range of definitions is to be found for hysteria (see Merskey, 1978). A second criticism concerns patient samples. Most of the clinical studies described used samples of psychiatric patients, often inpatients, and in this setting highly atypical physical symptomatology will be found. Thirdly, no investigation adequately described the patients in terms of variables such as symptom type, symptom course, symptom duration, symptom severity,

nature of onset, and past history of frequent non-organic medical consultations, and many investigations did not differentiate patients in whom other psychiatric illnesses were present. Thus, patient samples in the studies described in this section will have been very heterogeneous.

The term hysteria has now been dropped from the American classification of mental disorders (DSM-III) and it is proposed that hypochondriasis be dropped from the next edition (Hyler & Sussman, 1984). In the light of the multiple ways in which these terms have been used in the past, this would appear to be a sensible step. In the U.K. these terms may linger, however. It has been proposed that hypochondriasis be retained in the next edition of the influential Present State Examination (Wing, 1983), using one of the four definitions listed above.

If the term hypochondriasis is no longer used, then we are left with three abnormal psychological phenomena which probably warrant attention independently - fear of having a serious illness; mental preoccupation with symptoms and their significance; and conviction that serious illness is present despite medical reassurance. In the context of my study, one could argue that if unexplained physical symptoms are deemed to be present, then each of the above three phenomena should be enquired for. If present, they would be classed as 'associated features' but would not be incorporated into an illness definition unless warranted by further research.

Section 2.a. Clinical Studies on Non-Organic Physical
Symptoms

Table 11. Previous Clinical Studies on Non-Organic
Physical Symptoms

All symptoms:	Macdonald & Bouchier (1980)
	Slavney & Teitelbaum (1985)
Non-Painful Symptoms:	Wilson-Barnett & Trimble (1985)
Painful symptoms:	Bradley (1963)
	Woodforde & Merskey (1972)
	Elton et al.(1978)
	Mayou (1973)
	Beard et al.(1977)
	Gomez & Dally (1977)
	Hill & Blendis (1967)
	Bouchier & Mason (1979)
	Woodhouse & Bockner (1979)
	Creed (1981)
	Drossman (1982)
	Feinmann (1983)
	Bass et al.(1983a and 1983b)
	Chaturvedi et al.(1984)
	Blumer & Heilbronn (1982)
	Hudson et al.(1985)

The papers which will be discussed in this section are listed in Table 11.

All Symptoms

Macdonald & Bouchier (1980) investigated 42 patients with non-organic symptoms who formed part of a series of consecutive referrals to a medical/gastroenterology outpatient clinic in Dundee. Unfortunately, this non-organic group included patients with 'irritable bowel syndrome', a syndrome in which there are special difficulties in separating organic and non-organic factors (see chapter 6). Physical symptoms were not described in detail. The General Health Questionnaire (Goldberg, 1978), the Hysteroid-Obsessoid Questionnaire (H.O.Q.)(Caine & Hope, 1967), and the Standardised Psychiatric Interview (Goldberg et al. 1970) were used, and case history information collected. 55% of the 42 non-organic patients were given a psychiatric diagnosis, usually depressive illness or anxiety neurosis. This compared with 31% in the organic group. The non-organic group showed a significant trend towards obsessional personality trait scores on the H.O.Q. This group were more likely than the organic group to agree that they had experienced 'depression in the past', 'unhappy childhood', 'permanent parental loss before 15 years', and 'separation from parents before 5 years'. The authors used their data to support previous views that sufferers from non-organic illness tend to have

obsessional personality traits. They also concluded that childhood events can predispose towards non-organic gastrointestinal symptoms. In their final conclusion, the authors seemed to attribute most non-organic physical symptoms to psychiatric illness, saying, "if a symptom is present for which a physician has ruled out organic illness, then a psychiatric illness becomes a strong possibility....".

Slavney & Teitelbaum (1985) considered 100 consecutive referrals to a department of liaison psychiatry in the U.S.A. with 'medically unexplained physical symptoms'. 'Liaison psychiatry' is a sub-branch of psychiatry based at general hospitals and concerned with referrals from the non-psychiatric departments of their hospitals. Following the routine clinical practice of their department, DSM-III psychiatric diagnoses were sought. No reference to the reliability of these diagnoses was contained in the paper. In 14 patients, the DSM-III diagnosis was 'psychological factors affecting physical condition', indicating that in these patients, organic aetiology was partially involved. Of the remaining 86 patients, 67 (83%) were given a psychiatric diagnosis - in 34, this consisted of one of the Somatoform Disorders. No information was provided about the characteristics of the physical symptoms.

Non-Painful Symptoms

Wilson-Barnett & Trimble (1985) investigated a series

of 79 consecutive referrals to the liaison psychiatry service at the National Hospital, Queen Square of patients with neurological symptoms for which no organic explanations had been found. Painful symptoms were specifically excluded. Symptoms consisted mostly of motor disturbances, sensory disturbances, fits, and amnesia. The symptoms were not described in detail. The group was compared with 36 patients with definite neurological disease, and 34 patients with psychiatric illness, mostly depressive illness, who had no physical symptoms. Case history data was recorded, and the Hysteroid-Obsessoid Questionnaire (H.O.Q.)(Caine & Hope, 1967), the Eysenck Personality Inventory (E.P.I.)(Eysenck & Eysenck, 1964), two scales for depression, and the Illness Behaviour Questionnaire (I.B.Q.)(Pilowski & Spence, 1975) were used. Case history data showed that a higher proportion of the non-organic group had current sexual problems, and a higher proportion gave past histories of vague or undiagnosed physical complaints. On the H.O.Q. the index patients scored towards the obsessoid end, while the neurological group scored within the normal range. There were no differences on the E.P.I. between these two groups. Scores for depression were significantly greater in the index group than in the neurological group. On the I.B.Q. no differences between these two groups were found on 5 of the 7 factors. But the index group scored higher on 'affective disinhibition', and the neurological group higher on 'denial of life problems'.

In their discussion, Wilson-Barnett & Trimble emphasised the higher depression scores among the group with non-organic symptoms when compared with the organic group. These depression scores were however not as high as those in the psychiatric comparison group and the authors suggested that this was because a subgroup among the non-organic patients had high scores on denial as measured on the I.B.Q., and that they were denying the presence of depression. Thus, the authors concluded that, in many of their sample, the physical symptoms were caused by underlying affective illness. The authors also carried out inter-correlational statistical analyses on their data which they interpreted as indicating an association between the tendency to "somatise" and affective inhibition, low acknowledgement of anxiety and depression, and a tendency towards denial.

Painful Symptoms

Two difficulties are encountered when trying to examine the literature on non-organic or unexplained pain. Firstly, the term 'chronic unexplained pain' has often been applied to pain which follows initial trauma to the nervous system. Examples include limb amputation, causalgia following high velocity tissue damage, neuralgia such as herpes zoster, dorsal root lesions such as prolapsed intervertebral disc, and spinal cord lesions such as vascular haemorrhage. Although the mechanisms underlying this prolonged post-trauma pain are little understood, there is evidence (Melzack & Wall, 1982,

chapter 8) that organic processes may exist especially if deafferentation results from the initial injury. Secondly, a number of studies have examined both organic and non-organic types of pain together. This applies to several of the studies based at multidisciplinary pain clinics, for example, Large (1980) and Reich et al.(1983), along with others such as the study by Stockton et al.(1985) who made a psychological examination of upper abdominal pain of any origin. Some studies have excluded major organic disorders but not minor or equivocal. Examples include Pinsky (1978) and Schmidt (1985). Pinsky (1978) described the 'chronic intractable benign pain syndrome', pain which "cannot be shown to be causally related in the here-and-now with any active pathophysiological or pathoanatomic process". Despite forwarding this definition, the author's series of 200 patients included some with possible organic disease, along with others whose pain followed initial trauma. Schmidt (1985) investigated 39 patients with chronic low back pain, but only excluded those with "major pathological findings".

A number of studies have focused primarily on non-organic pain. Bradley (1963) investigated 35 patients with chronic localised pain of non-organic origin who also had depressive illness. Patients were not included if there was any doubt about the presence of organic disease, thus all cases of back pain were excluded! The patients had been referred to a department of psychiatry from other hospital departments. Two

groups emerged - in group I (n=16) onset of pain had preceded the depression usually by 2-5 years - in group II (n=19) onset of pain and depression had occurred together. The two groups could not be distinguished on a number of characteristics: age, sex, site of pain, previous psychiatric history which was seldom present, personality which was said to be often obsessional, and the nature of onset which was traumatic in about 40% (trauma, surgery, or disease). In almost all patients in group II did pain and depression recover with antidepressant treatment, usually drugs, and the author explained the painful symptoms in this group in terms of depressive illness. All patients in group I received E.C.T. and although depression recovered and pain sometimes improved, pain was never abolished and the author was unable to explain the painful symptoms in this group.

Woodforde & Merskey (1972a and 1972b) investigated 43 patients with chronic pain at the National Hospital, Queen Square. Details of patient selection were not published nor were the physical symptoms described in detail. One of the authors designated 27 patients 'organic' and 16 'psychiatric'. An 'unexplained' category was not included. In 14 of the 16 in the 'psychiatric' group the recorded diagnosis was tension headache or depressive illness. The authors applied the Middlesex Hospital Questionnaire (Crown & Crisp, 1966) and the Eysenck Personality Inventory (E.P.I.) (Eysenck & Eysenck, 1964) and found no differences between the

organic and psychiatric groups, which did not support their original hypothesis that certain personality traits predispose towards pain of 'psychiatric' origin.

Elton et al.(1978) investigated self-esteem in chronic non-organic pain. These authors postulated that some individuals are 'pain-prone', that is, prone to non-organic pain, and that these individuals would demonstrate low self-esteem. Unfortunately, their group of 20 patients, who had been referred to a department of psychiatry with chronic non-organic pain, included 11 with tension headache and 5 with tension headache and/or migraine - these conditions are no longer regarded as purely non-organic, for example in DSM-III. Using a 100-item scale, the authors did indeed find lower self-esteem than in control groups. The authors then carried out treatment "directed at improving self-esteem" - this included hypnosis, biofeedback, and placebo. Self-esteem scores improved as did the degree of pain. The authors concluded that self-esteem is lower in non-organic pain than in organic, that self-esteem can be modified by treatment, and that improving self-esteem improves the painful symptoms. The authors did not appear to consider that their treatments may have had direct effects on pain independent of any effects on self-esteem.

Beard et al.(1977) investigated 18 women with unexplained pelvic pain. Physical symptoms were not described in detail, although no differences were found

between this group and an organic group for pain site, pain quality, and associated physical symptoms. But on the E.P.I. the unexplained group had higher neuroticism scores, on a semantic differential test this group had lower self-esteem and higher anxiety, and the unexplained group also had a higher proportion with psychosexual problems. The authors concluded that women with non-organic pelvic pain tend to be more neurotic, to form less rewarding relationships, and that the 'choice' of site for their pain may relate to psychosexual conflicts. It should be noted that, despite these conclusions, in 5 of the 18 patients symptoms remitted or markedly improved shortly following the reassurance of a normal laparoscopy.

Mayou (1973) examined 50 consecutively referred patients to a cardiac outpatient clinic, referred because of chest pain. 17 patients with definite ischaemic heart disease were compared with 29 patients without organic findings. The 4 remaining patients were excluded because of equivocal diagnosis or unrelated diagnosis. Historical data was collected, and the Standardised Psychiatric Interview (Goldberg et al. 1970) performed. It was noteworthy that in 19 of the 29 non-organic patients, symptom duration was less than 6 months, and in 10, this was less than 1 month. The groups with long and short duration were however not compared. A range of frequency of previous medical consultation was also found, but again, groups at each extreme were not compared. There was no significant difference in the

proportions of patients given a psychiatric diagnosis, which was usually depression or anxiety, between the organic and non-organic groups. At a 3 month follow-up via questionnaire, 20 of the 28 non-organic patients traced continued to have at least occasional chest pain, and 9 out of 27 still believed that they might have heart disease.

Gomez & Dally (1977) carried out psychiatric assessments in 96 patients referred to a surgical clinic or a gastroenterology clinic because of abdominal pain. Assessment consisted of a single psychiatric interview and on the strength of this, all 81 patients without apparent organic disease were given a psychiatric diagnosis. This was depression, 'chronic tension', hysteria, or alcoholism. Physical symptoms were not described in detail, except that reference to symptom severity was made and this may have been mild - "all our psychogenic patients were able to continue working and lead their everyday lives". Measures of depression were higher and verbal expressivity was poorer in the psychogenic group than in the organic. This group also had greater likelihood of loss of parent in childhood, close relative with abdominal pain, and abdominal pain in childhood. The authors forwarded psychological explanations for all these patients, postulating roles for bereavement, poor verbal expressivity, learning based on childhood experiences, denial based on higher lie scores on the E.P.I., and identification with relatives.

Hill & Blendis (1967), Woodhouse & Bockner (1979), and Bouchier & Mason (1979) all carried out small investigations into non-organic abdominal pain. In the study of Hill & Blendis (1967), certain findings were more common in 31 patients with non-organic pain than in an organic comparison group - high neuroticism score on the Eysenck Personality Inventory, recent stressful life events, history of abdominal pain in parents, and depressive illness which was diagnosed in 6 patients (19%). Woodhouse & Bockner (1979) collected 17 patients with undiagnosed abdominal pain of at least 2 years duration from among all attenders at a department of surgery. In 8 (47%), symptoms were attributed to psychiatric illness, in 4, irritable bowel syndrome was diagnosed, and in 5, symptoms remained unexplained. Bouchier & Mason (1979) reported on 14 cases. Formal psychiatric evaluation was not performed, but in all cases, symptoms were thought likely to be attributable to stressful life events or to psychiatric illness.

Creed (1981) investigated patients aged 17-30 years with abdominal pain which required appendicectomy. 63 patients with appendicitis confirmed histologically were compared with 56 in whom no acute inflammation was found at histology and no other organic causes were apparent. The Brown and Harris life events schedule (Brown & Harris, 1978) and the Present State Examination were applied, shortly after the operation and one year later. The abdominal symptoms were not described in detail.

Members of the non-inflamed group were more likely to be female (82% compared with 38%). Both groups had experienced threatening life events such as the break-up of a close relationship over the 13 weeks before the operation (64% and 54% respectively), but the non-inflamed group had suffered significantly more severely threatening life events during the 38 weeks prior to the operation (59% compared with 25%). A higher proportion of patients in the non-inflamed group than in the inflamed group reported psychiatric symptoms over the one month before onset of abdominal pain (32% compared with 16%). At the one year follow-up, continued abdominal pain was reported by 58% of the non-inflamed group and 24% of the inflamed, these figures falling to 25% and 11% if only 'disabling' pain was considered. Psychiatric symptoms at the first interview had a predictive association with abdominal pain at follow-up, but this was not so for life events recorded at the first interview. The author interpreted his results by concluding that in approximately one third of the non-inflamed group, abdominal pain had been precipitated by depression which had in turn been caused by severely threatening life events, whereas in many others, a relationship between the severe event and the abdominal pain seemed to be direct. Creed did not discuss the subgroup within the non-inflamed group in whom neither life events nor psychiatric symptoms were found.

Drossman (1982), an American gastroenterologist trained in psychosomatic medicine, took 6 years to

collect a series of 24 patients with 'psychogenic abdominal pain'. Diagnostic criteria were used which had similarities with those for psychogenic pain disorder in DSM-III but which were not identical. No data is published on what proportion of all referrals with abdominal pain this 24 represented, nor on how many referrals had fallen short of the diagnostic criteria and were therefore unexplained. Assessments were carried out in an unstandardised way by the author alone, a limitation which he acknowledged. In all patients a psychological explanation was said to be present, the most common example being incompletely resolved grief which was said to be present in 16 of the 24 patients. In his conclusions the author recommended greater physician awareness of the possibility of psychogenic abdominal pain. He made no reference to unexplained pain, and may have given the impression that all non-organic pain should be regarded as psychogenic.

Feinmann (1983) studied 93 patients with non-organic facial pain. This was primarily a treatment study and a comparison sample was not included. The Standardised Psychiatric Interview (Goldberg et al. 1970) was used, along with other measures relevant only to the treatment trial. Mean duration of pain was 3.4 years but the range was wide (3 months to 30 years). In 72% of the patients the symptom had not caused a significant alteration in daily functioning. In 57% of the sample a psychiatric diagnosis was reached which was depressive neurosis in 35% and another neurosis in 22%.

Bass et al.(1983a) carried out psychiatric evaluations on 99 patients undergoing coronary angiography because of chest pain. 31 patients were found to have normal coronary arteries (group I) and 15 had only slight coronary artery disease (C.A.D.)(group II). Clinical details such as location, quality, and precipitants of the chest pain, number of respiratory and other bodily complaints, were recorded but not used to subclassify the patient samples. Symptom course, symptom duration, symptom severity, and nature of onset were not recorded. Using the Standardised Psychiatric Interview (S.P.I.)(Goldberg et al. 1970) the authors made psychiatric diagnoses in 58% of group I and 67% of group II which was significantly greater than the 23% found among the 53 patients with established C.A.D. Anxiety neurosis was the most common diagnosis in groups I and II. Unexplained breathing disorder (UBD) was defined in terms of respiratory symptoms, respiratory signs, and the bodily symptoms of possible hypocapnia. UBD was diagnosed in 74% of group I, 47% in group II, and in only 13% in those with definite C.A.D. There was a close association between psychiatric morbidity and UBD in group I. Because depressive neurosis was the most common diagnosis among those with definite C.A.D., the authors concluded that the psychiatric morbidity among those without C.A.D., which was usually anxiety neurosis, was more likely to be a cause rather than a consequence of the chest pain.

Bass et al.(1983b) reported follow-up data at 12 months for the 46 patients in groups I and II. In 19 chest pain had continued unchanged. 11 of these were so incapacitated that they had been unable to resume work. 13 of the 46 were given a psychiatric diagnosis at follow-up, using the S.P.I., in 11 this diagnosis was anxiety neurosis. The 19 patients with persistent chest pain were compared with the 27 in whom pain had improved. Those with persistent pain had greater psychiatric morbidity initially and at follow-up, had poorer scores on social adjustment at follow-up, had greater symptom duration (68 months compared with 37 months), had higher neuroticism scores on the E.P.I. completed at the initial assessment, and had used more psychotropic drugs during the follow-up year. On the strength of these findings, the authors concluded that the group of patients with persistent chest pain were "a chronically neurotic and socially maladjusted group in whom psychiatric disorder presents with predominantly somatic symptoms".

Yet another study (Chaturvedi et al. 1984) demonstrated a higher prevalence of psychiatric illness among those with 'non-organic' pain than those with organic. 100 patients in each group were compared. Pain duration was at least 3 months. Little clinical data is supplied for the non-organic group, the psychiatric assessment was unstandardised, and no attempt was made to subclassify the 100 non-organic patients. Thus, this study is limited in its contribution.

In an important paper Blumer & Heilbronn (1982) attempted to support their contention that chronic non-organic pain is a form of masked depression. Their paper is a review but also presented clinical data. The paper described 900 patients, with pain of no organic cause, seen by one of the authors over a 20 year period during his routine clinical work as a psychiatrist at general hospitals in the U.S.A. The authors viewed this large group as a single one, and indeed remarked on the "surprising homogeneity of psychiatric and psychological findings" in these patients. The clinical features, allegedly present in most patients, were continuous pain, hypochondriacal preoccupation, desire for surgery, denial of emotional conflicts, idealisation of self and others, being 'workaholics', symptoms of major depressive illness, family history of depression and alcoholism, and history of being abused by spouse. Psychodynamic characteristics, which were said by the authors to be common, were core needs to depend, to be passive, and to be cared for. Poor verbal expression of emotion (alexithymia, see chapter 8) was also said to be common. The authors chose the term 'pain-prone disorder' for their syndrome. They based this on the earlier writings of Engel (1959) and preferred this term to 'psychogenic pain disorder' which is used in DSM-III.

In the same paper Blumer & Heilbronn (1982) described a study in which 129 consecutive referrals of patients with chronic non-organic pain were compared with 36

patients with chronic organic pain (rheumatoid arthritis). In the non-organic group the pain was more likely to be continuous, to be less prolonged in duration (7.2 years compared with 14.0 years), and to have had a traumatic onset. In 35% this traumatic onset was said to be slight, such as a fall or heavy lifting. In 12% trauma was severe, such as gunshot wound or crush injury. A variety of depressive symptoms was more prevalent in the non-organic group. The non-organic group also had higher rates of history of abuse by spouse, family history of mental disorder (42%), past history of depression (12%), and history of being a 'workaholic'. The authors used this clinical data to support their view that 'pain-prone disorder' is a variant of depressive illness, most likely unipolar affective illness but possibly part of 'depression spectrum disease' (which includes alcoholism and sociopathy). In making this conclusion, the authors emphasised the high rates of personal and family history of depression, which were significantly greater than those found in the rheumatoid arthritis group.

In a subsample of 20 patients, Blumer et al.(1982) looked for the presence of biological markers of depressive illness, namely non-suppression on a dexamethasone suppression test (DST), and decreased REM latency on EEG. In addition to chronic non-organic pain, these subjects were selected only if they had insomnia. 8 of the 20 had abnormal DST, 8 of the 20 had abnormal REM latency, and 6 of the 20 had both. Presence of

either of these abnormal results had some predictive power for response of pain to antidepressant drugs. The authors used this data as further confirmation of their hypothesis that chronic non-organic pain is a variant of depressive illness.

Hudson et al.(1985) carried out detailed psychiatric examinations in 31 patients with fibromyalgia, otherwise known as fibrositis. This is a condition consisting essentially of unexplained diffuse musculoskeletal pain, although it is said to be associated with scattered tender areas called 'trigger points'. Aetiology is unknown but organic causes such as a connective tissue abnormality have not been entirely excluded. Mean symptom duration in the sample of 31 was 5.3 years but the range was wide (3 months to 20 years). 14 patients with definite rheumatoid arthritis served as a comparison group. A standardised psychiatric interview schedule was used which generated current and past DSM-III diagnoses. This was applied to all subjects by a single psychiatrist who was blind to both the rheumatic diagnoses and to the family psychiatric histories. Psychiatric histories of all first-degree relatives was obtained from the probands by an interviewer who was blind to the rheumatic and psychiatric diagnoses. Current major depressive disorder was present in 26% of the fibromyalgia group compared with 0% in the rheumatoid arthritis group. For current plus past major depressive disorder, the rates were 71% and 14% respectively. Major depressive disorder was also significantly more common in the relatives of patients

with fibromyalgia - 10% compared with 3% in the rheumatoid arthritis group. The figure for a group of 24 psychiatric patients all with major depressive disorder was 16%. Non-suppression on the DST was however found in only 1 out of the 23 fibromyalgia patients in whom the test was performed. The authors concluded that a relationship exists between fibromyalgia and major depressive disorder, but they were careful not to expound on the nature of this association. However, of the 22 fibromyalgia patients with a current or past diagnosis of major depression, 14 (64%) were said to have developed the depression at least one year before the onset of the fibromyalgia.

Critique of Chapter 5 Section 2.a. (Clinical Studies

on Non-Organic Physical Symptoms)

The important findings from 17 of the 20 studies described in this section will be summarised first (the very small studies of Hill & Blendis (1967), Woodhouse & Bockner (1979), and Bouchier & Mason (1979) have been omitted), followed by a critical examination of the methodology used in these studies and the conclusions reached by their authors.

In all studies, except one, in which psychiatric morbidity was assessed in patients with non-organic physical symptoms, this morbidity was increased. 'Increased' here refers to prevalence rates much higher than in the general population, and in many studies, also refers to rates significantly greater than in comparison groups with organic symptoms. Thus, increased prevalence of psychiatric illness was found by Macdonald & Bouchier (1980), Slavney & Teitelbaum (1985), Gomez & Dally (1977), Feinmann (1983), Bass et al.(1983a), Chaturvedi et al.(1984), and Hudson et al.(1985). In three other studies (Wilson-Barnett & Trimble, 1985; Creed, 1981; Blumer & Heilbronn, 1982) psychiatric diagnoses were not made but psychiatric symptom scores were high. The exception is the study by Mayou (1973) in which differences were not found between groups with organic chest pain and non-organic chest pain.

In many studies attempts were made to measure personality traits, and in most, abnormalities were found among patients with non-organic symptoms. Increased neuroticism on the Eysenck Personality Inventory was found in two studies (Beard et al. 1977; Bass et al. 1983b) but not in three others (Wilson-Barnett & Trimble, 1985; Woodforde & Merskey, 1972; Gomez & Dally, 1977). Obsessionality was found in two studies (Macdonald & Bouchier, 1980; Wilson-Barnett & Trimble, 1985). Low self-esteem was found in two studies (Beard et al. 1977; Elton et al. 1978). Impaired ability to verbally express emotions was detected by Wilson-Barnett & Trimble (1985), Gomez & Dally (1977), and Blumer & Heilbronn (1982).

A measure of social adjustment was made in one study (Bass et al. 1983b) and this demonstrated impairment in patients with prolonged unexplained chest pain. Severely threatening life events were found in another study to have preceded non-organic abdominal pain much more commonly than organic (Creed, 1981).

Historical items were collected in many studies. Increased family history of affective disorder was found by Blumer & Heilbronn (1982) and Hudson et al. (1985). Personal past history of depression was also commonly found by Blumer & Heilbronn (1982) and Hudson et al. (1985) along with Macdonald & Bouchier (1980). An unhappy childhood or loss of parent in childhood was found by Gomez & Dally (1977) and Macdonald & Bouchier (1980). A previous history of unexplained physical

symptoms was found by Wilson-Barnett & Trimble (1985). Current psychosexual problems were emphasised in the studies by Wilson-Barnett & Trimble (1985) and Beard et al.(1977).

It is on the basis of these results that many of the above authors reached some or all of the following conclusions: psychiatric illness, sometimes described as unexpressed, was the cause of physical symptoms in the non-organic groups; certain personality variables such as neuroticism, obsessionality, low self-esteem, and poor verbal expressivity, can predispose towards non-organic symptoms; social maladjustment can predispose towards non-organic symptoms; non-organic symptoms can be precipitated by severely threatening life events; unhappy childhood and psychosexual problems can predispose towards non-organic symptoms.

All the studies described in this section can be criticised methodologically to the extent that many conclusions could be regarded as over-stated, and many findings may not be valid. These criticisms can be applied to 1. patient selection, 2. subclassification of patient samples, 3. methods of measurement, 4. cross-sectional study designs, 5. choice of comparison groups. These five areas will now be discussed.

1. Patient selection

All studies were hospital based and no study used a

patient sample representative of the general population. A number of factors independent of symptom severity or significance can distort representativeness of patient samples presenting at hospitals. Self-selection factors probably exist whereby one patient requests hospital referral while another from the same population with similar symptoms does not. Referral practices vary between general practitioners (Morrell et al. 1971b; Cummins et al. 1981). Individual specialists can attract referrals of different symptom type. Specialists probably differ in which type of referrals will be accepted and seen. Criteria for selecting patients for investigations such as coronary angiography almost certainly vary. In some of the above studies (Slavney & Teitelbaum, 1985; Wilson-Barnett & Trimble, 1985; Bradley, 1963; Woodforde & Merskey, 1972; Elton et al. 1978) patient samples consisted of referrals to departments of psychiatry, and in such samples selection factors would be even more likely to distort representativeness.

2. Subclassification of patients

Symptom characteristics in the studies described may have been very heterogeneous and there were seldom attempts to subclassify patients and analyse subgroups separately. The principal selection criteria common to most studies was the exclusion of organic disease but even this may not always have been achieved with definite reliability (see chapter 3) and, furthermore, some

studies included disorders with possible organic components in their non-organic samples - for example, irritable bowel syndrome (Macdonald & Bouchier, 1980), migraine (Elton et al. 1978), and alcoholism (Gomez & Dally, 1977). Beyond this, there were no attempts to separate subjects for whom psychiatric illness seemed to be a definite explanation for symptoms from those without such an explanation. Thus, many non-organic patient samples may have been mixtures of psychiatric illness along with 'unexplained' disorders, and this could be one explanation for the greater psychiatric morbidity found in these groups. Despite this, many authors tended to apply their final conclusions to the whole group.

Nor did these studies subdivide their patients via physical symptom characteristics such as symptom course, symptom duration, nature of onset, symptom severity, and past history of frequent non-organic medical consultations. As far as symptom type is concerned, the vast majority of studies investigated painful symptoms only, one study examined symptoms predominantly of the somatic function type (Wilson-Barnett & Trimble, 1985), and in two studies this was not specified (Macdonald & Bouchier, 1980; Slavney & Teitelbaum, 1985).

Symptom course for 'unexplained physical symptoms' can almost certainly vary. The most simple distinction would be between constant and episodic courses. It is possible that different disorders and different underlying mechanisms would emerge if symptom course was

differentiated.

Symptom duration was not used in the above studies as a method of subclassification. Mean duration was published in a few - 3.4 years (Feinmann, 1983), 5.7 years (Bass et al. 1983b), 7.2 years (Blumer & Heilbronn, 1982), and 5.3 years (Hudson et al. 1985). It might be sensible to differentiate 'unexplained' symptoms of short and long duration. The relevance of this subdivision is now recognised by many pain researchers who regard chronic pain (usually defined as six months or more in duration) as a separate clinical entity from acute pain (Melzack & Wall, 1982, chapter 3).

Nature of symptom onset should be considered as a means of subclassification. It has already been pointed out that prolonged unexplained pain which follows a deafferenting injury might have organic explanations (Melzack & Wall, 1982, chapter 8). In two of the above studies (Bradley, 1963; Blumer & Heilbronn, 1982) it was acknowledged that a proportion of subjects suffered acute trauma at onset, yet they were not analysed separately. In other patients onset of symptoms could have consisted of an acute organic disorder such as viral gastritis or supraventricular tachycardia - in such cases it would be symptom perpetuation which was unexplained but not symptom precipitation. Acute onset, whether organic or not, could be differentiated from insidious. The psychological trauma which acute physical symptoms can sometimes cause might then emerge as an important

contributer to symptom perpetuation.

Symptom severity was seldom described in the above studies and certainly not used to subclassify. Physical symptoms are subjective experiences and therefore difficult to quantify. Symptoms of mild severity are very common in the general population. It would probably be helpful to differentiate different grades of symptom severity when examining 'unexplained' physical symptoms. Severity can be measured in terms of distress and/or disability. Self-report alone can be used as a measure of distress, but attempts can be made to use objective indices such as need to rest, need to consult a doctor, or need to take medication. Disability can usually be assessed more objectively by such means as rating the limitations caused to occupational, social, or leisure functioning.

Previous pattern of medical consultation may be a variable worth using for subclassification. Only one of the above studies assessed this (Wilson-Barnett & Trimble, 1985) but did not use the measure for subclassification. The 'unexplained' symptoms of a patient who consults frequently, perhaps with varying complaints of non-organic nature, should perhaps be viewed and investigated differently from 'unexplained' symptoms presenting in an infrequent consulter. In the latter, a mechanism independent of consultation behaviour must be responsible. Within the former group could exist patients meeting the DSM-III criteria for somatisation

disorder.

In the previous section on hypochondriasis it was stated that three psychological phenomena were to be found in previous definitions of hypochondriasis - fear of having a serious illness, mental preoccupation with symptoms and their significance, and conviction that serious illness is present. These three phenomena could also be used to subclassify 'unexplained' physical symptoms. These variables were rarely referred to in the studies under consideration. Illness conviction is associated with the failure of a patient to accept a doctor's reassurance that no disease can be found. Such patients should probably be differentiated from those whose symptoms remit after reassurance. It will be noted that although Beard et al.(1977) analysed their group with unexplained pelvic pain as one group, in 5 out of the 18 patients symptoms remitted after the reassurance that laparoscopy was normal was received.

3. Measures

The next broad area of criticism concerns the measures used in the studies described in this section. In 6 studies, psychiatric assessment was via an unstandardised and often routine clinical interview apparently carried out by a single psychiatrist (Slavney & Teitelbaum, 1985; Bradley, 1963; Gomez & Dally, 1977; Drossman, 1982; Chaturvedi et al. 1984; Blumer & Heilbronn, 1982). Such an approach may be unlikely to produce reliable and valid

findings. In 7 studies, standardised psychiatric interview schedules were used (Macdonald & Bouchier, 1980; Mayou, 1973; Creed, 1981; Feinmann, 1983; Bass et al. 1983a; Bass et al. 1983b; Hudson et al. 1985), although all were apparently performed by a single psychiatrist. Use of such schedules improves validity considerably, although this can be strengthened further if the schedules are used by two independent psychiatrists blind to one another's ratings.

A number of rating scales were used in the above studies. Some, such as the Beck Depression Inventory (B.D.I.) used by Wilson-Barnett & Trimble (1985) and the Eysenck Personality Inventory (E.P.I.) used in five studies, are widely used scales whose validity is usually accepted. Other rating scales used in the above studies have not yet been shown to have sound reliability and validity - examples include the Hysteroid-Obsessoid Questionnaire used by Macdonald & Bouchier (1980) and Wilson-Barnett & Trimble (1985), the Illness Behaviour Questionnaire used by Wilson-Barnett & Trimble (1985), the self-esteem scale used by Elton et al.(1978), the semantic differential test used in the study by Beard et al.(1977), and the verbal expression score used by Gomez & Dally (1977).

Historical data was used in several studies and simply based on patients' reports. Such data is unlikely to be entirely reliable, especially when events from several years before are being recalled. This method was also

used by Blumer & Heilbronn (1982) and Hudson et al. (1985) to determine family psychiatric history, while more objective schedules for doing this exist (Williams & Spitzer, 1982).

4. Study design

The next methodological observation to make on the above studies is that they were all cross-sectional in design and all investigated patients after symptom onset, often several years after symptom onset. Of course, to perform a longitudinal study on patients who develop 'unexplained' physical symptoms before the onset of these symptoms would be a formidable undertaking. Cross-sectional studies can provide useful and important information, but it is seldom possible to ascertain the causal direction of associations found. It is in this respect in particular that many of the above studies can be criticised because most of the authors concluded that the psychiatric, personality, social, and historical variables found to be associated with non-organic symptom status were causal of these symptoms. What cannot be excluded is that the psychiatric abnormalities, and some of the other abnormal findings, were effects of the non-organic symptoms. It is known that chronic organic pain can lead to psychiatric disturbance, especially depressive states (Melzack & Wall, 1982, chapter 3) - why should chronic non-organic symptoms not do the same? There are additional factors which could enhance the psychiatric sequelae of chronic unexplained symptoms,

namely that individuals are aware that diagnosis or explanations have not been found, that treatment cannot be easily instituted, and that prognosis is uncertain. The other disadvantage of cross-sectional studies is that the accuracy of data can be impaired. Some of the above studies used measures of personality and most authors appeared to assume that these were reflecting premorbid functioning. However, other studies have shown that scores on personality inventories can be altered in the direction of abnormality by the effects of symptoms, with a return to normal ranges when symptoms resolve or improve (Bond, 1981). Other self-reported data such as history of childhood events could also be distorted by the effects of symptoms, especially if depression develops which alters cognitions.

5. Comparison groups

In 12 out of the 17 studies a comparison group with diagnosed organic disease was used. But in no study were the organic and non-organic samples matched for age, sex, social class, etc. Of possible crucial importance, groups were also never matched for physical symptom variables such as severity and duration, so that the organic groups may have been experiencing lesser degrees of symptoms at the time of study. The fact that this could explain some of the differences in psychiatric and psychological scores cannot be ruled out. Organic disease can often be treated and can sometimes remit so it is possible that symptom severity was less in the organic

comparison groups. As already mentioned, another potentially important factor is that the organic patients knew that an explanation had been found for their symptoms and that treatment should follow.

Summary and Conclusions

Methodological problems strongly limit the conclusions that can be drawn from existing clinical studies into non-organic and unexplained physical symptoms. Future research will require to improve the methodology adopted. Nevertheless, one finding whose validity is probably true is the increased prevalence of psychiatric illness among patients with non-organic physical symptoms. This has been a consistent finding, and prevalence rates have usually been very high. In 10 of the 17 studies discussed in this section, this prevalence was quantified. In 7 studies psychiatric diagnosis was recorded and prevalence rates ranged from 26% (Hudson et al. 1985) to 100% (Gomez & Dally, 1977), with 5 studies finding rates above 50% (Macdonald & Bouchier, 1980; Slavney & Teitelbaum, 1985; Gomez & Dally, 1977; Feinmann, 1983; Bass et al. 1983a). In 3 studies severe psychiatric symptoms were measured and prevalence rates of 42% (Wilson-Barnett & Trimble, 1985), 32% (Creed, 1981), and 46% (Blumer & Heilbronn, 1982) were found. This high prevalence of psychiatric disorder, much higher than in normal populations, could be used as a basis for further research. This could be aimed at determining how much of this psychiatric illness is causal of the

non-organic symptoms, how much is effect, and how large is the subgroup in whom overt psychiatric illness plays no part in aetiology.

Section 2.b. Review Articles on Non-Organic Physical
Symptoms

Symptoms of All Types

In a paper entitled 'Psychiatry and the mysterious medical complaint', Goodwin (1969), an American psychiatrist, suggested that three psychiatric syndromes should be considered when unexplained physical symptoms are encountered - hysteria (that is, St Louis hysteria or somatisation disorder), anxiety neurosis, and depressive illness. The author stated that symptoms which cannot be attributed to one of these syndromes often warrant further search for an organic cause. Goodwin stated that this field had been neglected in American psychiatry because of its emphasis on theory about aetiology rather than descriptive psychopathology.

Lowy (1975) also presented a psychiatric differential diagnosis for patients with 'bodily symptoms which cannot be adequately explained by the degree of organic pathology present'. These were depressive illness, anxiety state, conversion phenomena, hypochondriasis, delusions and hallucinations which are hypochondriacal in content, 'classical psychosomatic disorders' like hypertension and peptic ulcer, and the expression of emotional distress in bodily language. Like Goodwin (1969), Lowy did not discuss the possible existence of 'unexplained' symptoms.

Lloyd (1983) was mostly concerned with non-organic physical symptoms which can herald psychiatric illness. He called this 'medicine without signs', the title of his paper. Early in the review, the author did state that absence of organic disease does not necessarily indicate psychiatric illness. Other possible explanations which he forwarded were personality traits which lead to amplification of bodily sensations, and reactions to transient life stresses. And he did state that in some cases no explanation at all can be found for symptoms. The remainder of the paper outlined the physical symptoms most likely to be the ones which herald psychiatric illness and an impression may have been created that most such non-organic symptoms are psychiatric in origin. Lloyd concluded that doctors should try and "elicit the psychological symptoms which lie behind the somatic facade". The author could also be criticised for accepting too confidently conclusions of previous studies of poor methodology, many of which I have already reviewed.

Unexplained symptoms can be those suggestive of heart disease such as palpitations and chest pain. In an interesting historical review, Skerritt (1983) discussed these symptoms and pointed out that a number of terms have been applied to non-organic cardiac-type symptoms since the 19th century such as Da Costa's syndrome, effort syndrome, soldier's heart, neurocirculatory asthenia, and cardiac neurosis. Skerritt suggested that

the modern term for this syndrome is the 'mitral valve prolapse syndrome'. It should be noted that descriptions of all these syndromes have often been polysymptomatic rather than confined to cardiac-type symptoms. In Skerritt's view, non-organic cardiac-type symptoms are caused by undiagnosed anxiety. Thus, another view was expressed that non-organic symptoms are usually psychiatric in origin.

Brandon (1983) reviewed unexplained chest pain, unexplained that is by coronary angiography. He discussed the main possible psychiatric causes for such symptoms such as depressive illness and anxiety states including panic disorder, but he was careful to avoid suggesting that all unexplained chest pain is psychiatric in origin.

In a review of non-organic gastrointestinal symptoms, Lennard-Jones (1983) also referred to the common psychiatric disorders which can be causative such as depressive illness and anxiety state. This author also pointed out that surveys have demonstrated very high occurrence rates of gastrointestinal symptoms in the general population, and suggested that self-referral to doctors might be due to factors other than symptom severity.

Mayou (1976) in a review entitled 'The nature of bodily symptoms', was cautious about the way the literature can be interpreted in this field. He pointed

out that many patient samples had been highly selective, especially those taken from referrals to psychiatric departments. He also pointed out that previous studies had failed to subclassify unexplained bodily complaints in terms of symptom type, symptom duration, disability caused, presence of illness fear, and presence of illness behaviour (that is, reinforced behaviour).

Painful Symptoms

Review articles on unexplained or non-organic painful symptoms have generally considered whether or not such symptoms represent psychiatric disorder, especially depressive illness. George Engel (1959), in an often-quoted paper entitled 'Psychogenic pain and the pain-prone patient', presented views based on many years experience of patients with pain as a psychoanalytically orientated psychiatrist. He believed that pain could be experienced in the absence of peripheral stimulation, drawing an analogy with visual and auditory hallucinations. He believed that pain and the relief of pain played an important part in the personality development of the child. He stated that some individuals are "more prone than others to use pain as a psychic regulator", and that these 'pain-prone' individuals show some or all of the following features: presence of guilt, with pain the atonement; history of suffering and defeat, intolerance of success, propensity to solicit pain (masochism); unfulfilled aggressive drive; pain as a replacement for loss when a

relationship is threatened or lost; tendency towards sado-masochistic sexual development; location of pain determined by identification, for example with a loved one; tendency to receive a psychiatric diagnosis.

Stengel (1965) discussed psychoanalytical theories in his discussion of non-organic pain presenting to the psychiatrist, but he also emphasised the correlation between non-organic pain and underlying psychiatric illness, especially depression.

Merskey (1980 and 1984) discussed the role of the psychiatrist in the treatment of pain. He believed that the two most common mechanisms in leading to psychogenic pain were skeletal muscle tension and hysteria, and that the most common psychiatric disorders which produce this pain were neurotic depression, anxiety states, hypochondriasis, and hysteria.

Blumer & Heilbronn (1982 and 1984) reviewed literature which in their opinion supported the concept that chronic pain of uncertain origin is a form of masked depressive illness. These authors distinguished patients with chronic pain arising from acute trauma from those with chronic pain without such an onset. In the former, the authors stated that neurophysiological abnormalities may explain the pain. But in the latter group, they believe that the chronic pain is best viewed as a psychological phenomenon rather than a sensory one. Rejecting the entity psychogenic pain disorder which is contained in

DSM-III, Blumer & Heilbronn proposed the term 'pain-prone disorder' (offering acknowledgements to Engel, 1959) for chronic unexplained pain, calling it a variant of depressive illness. The authors reviewed the literature which demonstrated an association between chronic pain and depression, and stated, giving four references in support, that "careful questioning usually reveals that depressive symptoms heralded the pain". The authors also referred to one study (Schaffer et al. 1980) which demonstrated a higher frequency of affective disorder among first-degree relatives of chronic pain patients. Drawing on previous papers such as that of Engel (1959), Blumer & Heilbronn listed a number of personality characteristics which they said predispose towards 'pain-prone disorder'. These included guilt, masochism, a history of defeat, loss, unmet dependency needs, working hard from an early age, rejection of psychological explanations for pain, poor verbal expression of emotions, and reluctance to acknowledge life problems. The authors rejected the concept of conversion as an explanation for chronic pain. They concluded that "chronic pain is...the somatic expression of an unresolved psychic pain" in the form of "unbearable guilt and anguish".

In an invited critique of Blumer & Heilbronn's paper, Williams & Spitzer (1982) pointed out that these authors had not outlined diagnostic criteria for their proposed syndrome. In passing, Williams & Spitzer stated that in their experience, positive psychological evidence of

aetiology was often not discernible in chronic unexplained pain, and they proposed the term 'idiopathic pain disorder' rather than 'pain-prone disorder' as favoured by Blumer & Heilbronn. Proposed diagnostic criteria for idiopathic pain disorder are shown in Table 12. Williams & Spitzer opposed the view that chronic

Table 12. Diagnostic Criteria for Idiopathic Pain

Disorder Proposed by Williams & Spitzer (1982)

A. Preoccupation with severe pain of at least 6 months' duration is the predominant disturbance.

B. The pain presented as a symptom is inconsistent with the anatomic distribution of the nervous system; after extensive evaluation, no organic pathology or pathophysiological mechanism can be found to account for the pain; or, when there is some related organic pathology, the complaint of pain is grossly in excess of what would be expected from the physical findings.

C. Not due to somatisation disorder, schizophrenia, or major depression.

pain be regarded as a variant of depressive illness. They challenged the evidence presented by Blumer & Heilbronn which was said to have shown similarities in symptoms between chronic pain and depression, that depression preceded pain rather than vice versa, and that

family history of affective illness was increased among chronic pain patients. Williams & Spitzer also believed that evidence pointing to psychodynamic predispositions had not been collected reliably enough. These authors also pointed to two characteristics of depressive illness apparently never found in 'pain-prone disorder' as described by Blumer & Heilbronn - a relapsing/remitting course, and the presence of psychotic features.

In an uninvited response to Blumer & Heilbronn's paper, Turk & Salovey (1984) were very critical. They actually accused Blumer & Heilbronn of selectively reviewing articles which supported their position. Turk & Salovey suggested that a more parsimonious explanation of the association between chronic pain and depression was that depression follows the development of pain of uncertain origin in which the individual sees little hope of satisfactory alleviation and in which previous behaviourally reinforcing activities cannot be performed. These authors accepted that for a subset of chronic pain patients, the model of Blumer & Heilbronn might apply.

Roy et al.(1984) reviewed the association between chronic pain and depression and found that overall evidence did not support the claim that non-organic pain is a form of masked depression. These authors pointed to some studies which had not demonstrated high rates of depression among chronic pain subjects. They also discussed studies which have demonstrated a beneficial effect of antidepressant drugs on chronic pain, a point

which some authors have used to support the masked depression model. However, other mechanisms suggested by Roy et al. whereby these drugs could improve pain are independent analgesic action, potentiation of analgesic drugs, and placebo effect. Roy et al. were critical of the methodology used in previous studies in this field. Sound sampling methods and the selection of adequate control subjects, they said, had been rare. Definitions and measures of depression had varied widely. And studies which had investigated antidepressant drugs had not been strong and outcome measures had often not been clearly stated.

Melzack & Wall (1982, page 49) also addressed the relationship between chronic pain and neurotic symptoms and referred to studies which have shown decreased psychological disturbance following pain recovery, stating that this suggests that psychological disturbance is more often the result rather than the cause of chronic pain.

Swanson (1984) entitled his review 'Chronic pain as a third pathologic emotion'. He drew analogies between acute pain and chronic pain, acute fear and chronic anxiety, acute grief and chronic depression, pointing out that in each pathology the acute phenomenon usually has an explanation while the chronic does not. He suggested that chronic nonprogressive pain is primarily a neuropsychological phenomenon, as are chronic anxiety and depression, and that each has neurochemical correlates.

The author stated that clinical pictures can be complicated by the frequent occurrence of anxiety, depression, and chronic pain in various combinations. He felt that this was not surprising if the three are regarded as similar emotional states with phenomenological and neurochemical overlap.

Summary of Chapter 5

This chapter has reviewed the current state of clinical knowledge concerning 'unexplained' physical symptoms by examining previous published clinical studies and review articles. Most of the literature examined has considered non-organic physical symptoms in general or 'hypochondriasis' or 'hysteria', because few papers have confined attention to 'unexplained' symptoms as I have defined these, namely, symptoms for which organic and psychiatric causes have been excluded.

The most consistent impression to be gained from this literature is the strong association between non-organic physical symptoms and psychiatric illness, especially depressive illness and anxiety states. Other findings, of probable validity, concern increased rates of family and personal past history of affective disorders among patients with non-organic or unexplained symptoms, a causative role for severely stressful life events, and the association between non-organic symptoms and impaired ability to express emotion verbally.

Many previous authors have concluded that non-organic physical symptoms are usually caused by psychiatric illness which may be 'masked', although several authors have been more cautious. Methodological limitations to previous studies, which may make this conclusion doubtful, are as follows:

1. unrepresentative patient samples
2. failure to subclassify non-organic patient groups, firstly via the presence or absence of likely psychiatric causes of the symptoms, secondly via clinical variables such as symptom type, symptom course, symptom duration, symptom severity, nature of onset, past history of frequent non-organic medical consultations, presence of illness fear, mental preoccupation with symptoms, and presence of illness conviction.
3. failure to use reliable and consistent definitions, at least in the cases of 'hypochondriasis' and 'hysteria'.
4. use of methods of measurement and assessment which may not be reliable.
5. reliance on cross-sectional study designs
6. use of unmatched comparison groups

I have suggested that further research is needed of improved methodology to investigate the nature of the relationships between non-organic physical symptoms and psychiatric illness, and to investigate in more depth patients in whom psychiatric aetiology appears absent, that is, in whom symptoms are truly 'unexplained'. I have also supported the trend, which is more evident in the U.S.A. than in the U.K., to avoid use of the terms 'hypochondriasis' and 'hysteria'.

The most common example of non-organic physical symptoms, as judged by the distribution of papers reviewed in this chapter, concerns unexplained pain.

Williams & Spitzer (1982) have proposed the term 'idiopathic pain disorder' for unexplained pain of at least 6 months duration. The diagnostic criteria which these authors propose are based on clinical descriptive features only. Use of this concept of 'idiopathic pain disorder' may permit the easier advance of research in this field. The association between chronic unexplained pain and depressive illness requires particular clarification. One interesting hypothesis proposed by Swanson (1984) states that chronic unexplained pain, depressive illness, and chronic anxiety, are all neuropsychological disorders with similar neurochemical abnormalities, linked by overlapping symptoms.

Chapter 6 PREVALENCE AND CLINICAL IMPORTANCE OF
UNEXPLAINED PHYSICAL SYMPTOMS

The prevalence of 'unexplained physical symptoms' is not known. Existing prevalence data are difficult to interpret because of the presence of the same methodological problems emphasised in the last chapter. Available data does nevertheless suggest that 'unexplained physical symptoms' may be fairly common, and their clinical importance is suggested by the large number of review articles which medical authors have felt urged to write.

Community

A number of community surveys have found the prevalence of physical symptoms to be very high (Leighton et al. 1963; Langner & Michael, 1963; Wadsworth et al. 1972; Hannay, 1979). Prevalence rates of 60%-80% have been shown. Banks et al.(1975) studied a sample of 198 women in the community. Health diaries were recorded over 28 day periods. The mean number of symptom episodes for the group was 6.2, which extrapolates to 81 per year. Yet the annual GP consultation rate was only 4.7. The average length of symptom episodes was 1.6 days. It is unlikely that organic explanations exist for more than a small proportion of physical symptoms found in community samples. However, most symptoms will almost certainly be minor in severity and short in duration, and they are

probably of little relevance to this Thesis, except to demonstrate the large reservoir of physical symptoms from which more severe unexplained disorders could emerge.

Primary Care

No primary care study has specifically set out to determine the prevalence of 'unexplained' physical symptoms among consulters. But studies which have described the range of complaints presenting to primary care doctors have supplied indirect evidence that physical symptoms without apparent organic explanations are very common (see Barsky & Klerman, 1983 and Katon et al. 1984). The primary care studies of Morrell's group (Morrell et al. 1971a; Morrell, 1972), carried out in London, provide some interesting data on prevalence. This group classified presenting symptoms in two ways - by symptom type and site; and by diagnostic confidence. For the latter, three grades were used - no diagnosis, provisional diagnosis, and confident diagnosis. Only new symptoms were studied, defined as symptoms which had not been the subject of a medical consultation for one year. 5,325 such presenting symptoms were analysed, representing all 'new' symptoms from the practice population over a one year period. The most common symptom was cough (9.9%), followed by skin rashes (5.7%) and pain in throat (5.4%). Also among the most common symptoms were pain in abdomen (3.7%), disturbance of bowel function (3.5%), pain in back (3.2%), pain in chest (3.2%), and pain in head (3.0%). Rates of diagnostic

confidence varied considerably with symptom. Thus, 'no diagnosis' was recorded for only 4% of coughs, but was recorded for 46% of disturbances in bowel function, 18% of pains in abdomen, and 14% for pains in head. Hence, 86 new consultations (1.6% of the total) for unexplained bowel dysfunction and 35 (0.7%) for unexplained abdominal pain took place over the year. The authors did not publish data on symptom severity and symptom duration, so we do not know what proportion of symptoms were mild and transient.

There have been a number of well-known U.K. surveys of psychiatric morbidity among general practice consultants (Kessel, 1960; Shepherd et al. 1966; Cooper et al. 1969; Goldberg & Blackwell, 1970; Morrell et al. 1970; Hartley et al. 1984). While concentrating on psychiatric morbidity, all of these studies, except that of Cooper et al.(1969), published data on all presenting symptoms. This field has been reviewed by Goldberg & Huxley (1980). It is believed that morbidity in N.H.S. general practice is a useful index of community morbidity because almost the whole U.K. population is registered with a general practice and around 70% of those registered consult a doctor at least once a year. None of the above surveys included a category for unexplained physical symptoms. Symptoms were usually classified as organic or psychogenic, the organic symptoms being subclassified by bodily system. One survey (Hartley et al. 1984) actually recorded an ICD diagnosis for each consultation without grading diagnostic confidence, a method which has been

criticised elsewhere (Williams et al. 1980).

Hospital Psychiatric Practice

To my knowledge, there is no adequate existing data on the prevalence of 'unexplained' physical symptoms among routine psychiatric referrals. Thomas (1983) published an interesting account of the first 300 referrals to the newly established liaison psychiatry department at a general hospital in Leicester. These referrals were collected over an 18 month period. 89 patients (30%) had been referred because of physical symptoms for which no adequate organic explanation had been discovered.

Hospital Medical Practice

Symptoms which cannot be explained by organic pathology are thought to be common in hospital medical practice, but there has been little attempt to systematically assess this. A number of research studies have recruited large samples of patients with non-organic symptoms, apparently with ease, suggesting that these symptoms are fairly prevalent. For example, Kreitman et al.(1965) set up a research clinic at a general hospital for patients with persistent somatic complaints not adequately accounted for by clinical investigations and received 120 referrals over two years. The other indication of the high prevalence of unexplained symptoms in hospital practice is the large number of articles on this subject to be found in the medical literature.

These papers have nearly all focused on one symptom or on one bodily system, and some of these papers will now be reviewed.

Unexplained head pain

Headache is a common symptom in medical settings. Some are due to classical tension headache, some to classical migraine, some to other organic disorders, and some to psychiatric illness. The prevalence of totally 'unexplained' headache is not known. A review of the psychological aspects of headache was recently published by Roy (1984). This author concluded that longitudinal controlled studies using community samples are required before unexplained headache can be adequately investigated. It should be noted that tension headache is now regarded in DSM-III as a syndrome with an organic (pathophysiological) mechanism (American Psychiatric Association, 1980). This does not preclude the possibility that aetiology is psychogenic, but it seems that tension headache should not be regarded as an 'unexplained' disorder. Headache has been regarded as one physical symptom which is especially common in masked depressive illness (Lancet, 1984a; Roy et al. 1984). There is some evidence that serotonin deficiency in the brain is more common in headache syndromes (Lancet, 1984a) and this could be a mechanism explaining the association with depressive illness in which serotonin deficiency also occurs.

Unexplained facial pain

Two facial pain syndromes can be regarded as unexplained - the temporomandibular joint dysfunction syndrome and atypical facial pain. These syndromes are often described as 'psychogenic' but in her review, Feinmann (1983) suggested that there is not sufficient evidence to support the use of this term. These syndromes are said to be common, especially in dental practice. One Scandinavian survey (Agerberg & Carlsson, 1972) indicated that 25%-45% of the population are affected at some time in life. Atypical facial pain is another syndrome which has been linked closely with masked depressive illness (Lascelles, 1966).

Unexplained cardiac-type symptoms

Unexplained angina-like chest pain is said to be common in cardiology practice and up to 33% of patients undergoing coronary angiography have normal coronary arteries (Brandon, 1983). In the study by Bass et al.(1983a), 31 patients (31%) out of a consecutive series of 99 undergoing coronary angiography had normal vessels, while a further 15 (15%) had only slight disease. It is known that such patients have low subsequent cardiac mortality (Brandon, 1983). Non-organic palpitations are also said to be common in hospital medical practice (Skerritt, 1983), but precise prevalence figures are not available.

Unexplained gastrointestinal symptoms

Gut symptoms are among the most prevalent of all physical symptoms. Community surveys have shown that 20%-25% of people report having experienced abdominal pain more than six times in the previous year, and a further 10%-17% reported symptoms of bowel dysfunction (Thompson & Heaton, 1980; Drossman et al. 1982). 10% of all new consultations in one general practice survey (Morrell et al. 1971a) were for gastrointestinal symptoms, and this was superseded only by upper respiratory tract symptoms. There is no way of knowing how many of these symptoms are 'unexplained' but a number of hospital-based studies have published figures on non-organic symptoms. Unfortunately, there is one confounding factor, in addition to methodological limitations already referred to, which makes these figures difficult to interpret -- namely, most non-organic series have included irritable bowel syndrome (IBS), a syndrome in which organic mechanisms have not been excluded.

Harvey et al.(1983) examined 2000 consecutive referrals to a U.K. gastroenterology clinic, collected over a five year period. 888 (44%) were said to have definite non-organic diagnoses. Of these, 449 were said to have irritable bowel syndrome, 107 had painless diarrhoea, 77 had endoscopy-negative dyspepsia, 50 had abdominal pain said to be due to depression, and 122 had miscellaneous conditions. So, a large proportion of

patients apparently had unexplained symptoms.

Macdonald & Bouchier (1980) examined 106 consecutive referrals to a gastroenterology clinic and of the 67 patients with gastrointestinal symptoms for whom complete data was available, 32 (48%) were said to have non-organic disorders. This again included irritable bowel syndrome. Gomez & Dally (1977) studied 96 referrals to medical and surgical clinics, 81 (84%) of whom were considered to have non-organic symptoms. It is not stated whether this was a consecutive series. Creed (1981) investigated a consecutive series of patients within the age range 17-30 years who required appendicectomy. 119 subjects were collected from three hospitals over a 10 month period. 56 (47%) had a normal appendix histologically and no other organic explanations were found.

In an interesting study by Rang et al.(1970), prevalence data was obtained for unexplained abdominal pain (using ICD codes) requiring hospital admission and based on the general population in a defined geographical area in and around Oxford. 243 patients in the age-range 20-59 were discharged from hospital with this ICD 'diagnosis' during 1962-1963. Admission rate was greatest for females aged 20-29, being 1.4 per 1,000 general population. This rate fell to 0.5 per 1,000 for females aged 50-59. The rate for males was approximately 0.5 per 1,000 population with little variation with age. In 14% of the entire sample examined by the authors (all

age groups above 10 years) appendicectomy was performed but the appendix had proved to be histologically normal.

Irritable bowel syndrome(IBS): This diagnostic label can be applied to patients with abdominal pain and/or disordered bowel habit in whom organic disease has been excluded. IBS has been the subject of much medical writing. Recent reviews include Stonehill & Misiewicz (1980), Beck (1984), and the Lancet (1984b). No reliable and objective diagnostic methods exist, so it is not clear whether the patients labelled as IBS are homogeneous, or whether they represent a mixture of undetected organic disorders, psychiatric disorders, and truly 'unexplained' symptoms. A degree of predictive validity was said to be found by Holmes & Salter (1982) who followed up 77 patients in whom the diagnosis had been made at least six years previously. In only 4 patients could an alternative diagnosis have been entertained. Rather than demonstrating predictive validity for IBS, these results could be interpreted as showing predictive validity for the exclusion of organic disease. Evidence against diagnostic validity is the considerable variation in symptom patterns found, including site of pain (Beck, 1984). A chronic course was found by Holmes & Salter (1982) - 44 patients (57%) had remained symptomatic throughout the follow-up period but had 'learned to live with' their symptoms.

Theories about organic mechanisms in IBS have centred on disorders of gut smooth muscle motility (Beck, 1984;

Lancet, 1984b). Colonoscopy balloon studies have consistently demonstrated hyper-reactive muscle motility, and furthermore, balloon distension of certain colon sites has often reproduced the patient's abdominal pain. Such an organic mechanism does of course not preclude a psychogenic aetiology, but it is in the area of aetiology that much controversy exists (Beck, 1984; Lancet, 1984b). There are those who hypothesise entirely organic aetiologies such as a primary abnormality of gut smooth muscle, or an abnormality of neurohumoral control mechanisms, or dietary sensitivities such as lactose intolerance. But there are others who suggest psychogenic aetiologies, and it is true that groups of patients diagnosed as IBS have been shown to have high rates of psychiatric morbidity, higher than comparison samples (Stonehill & Misiewicz, 1980). However, much of this data is difficult to interpret because of methodological problems of the sort already discussed in chapter 5.

In summary, further research is clearly needed on the abdominal symptoms presently being diagnosed as irritable bowel syndrome. There appears to be justification in calling these symptoms 'unexplained', but perhaps in view of the doubt concerning organic contributions to mechanisms and aetiology, such symptoms should be classified separately from other 'unexplained' symptoms.

Unexplained oesophageal symptoms

These involve symptoms attributable to oesophageal spasm such as retrosternal pain and dysphagia. Such symptoms have been found to be associated with both oesophageal smooth muscle abnormalities and with psychiatric disturbance. The field has been reviewed by Schuster (1983). These findings are similar to those concerning the colon in irritable bowel syndrome, and such oesophageal disorders are sometimes termed 'IBS of the oesophagus'. Schuster was careful to state that the causal relationships between oesophageal motility abnormalities and psychiatric disorder are not yet known.

Unexplained pelvic pain

The term pelvic pain most commonly refers to lower abdominal pain but also refers to the symptom of dyspareunia. These symptoms are said to be particularly common at gynaecology clinics (Lancet, 1981). Pelvic laparoscopy has considerably improved diagnostic accuracy but this investigation has only confirmed the high prevalence of unexplained pelvic pain in gynaecology departments. Gillibrand (1981) found that in 63% of a series of 331 women with pelvic pain warranting laparoscopy, no organic disorder was found. A special source of anxiety affecting sufferers of pelvic pain is the possible presence of chronic pelvic inflammatory

disease which could threaten future fertility.

Unexplained pelvic pain has been reviewed by the Lancet (1981) and by Beard et al. (1984). In an analogous manner to irritable bowel syndrome, mechanisms and aetiologies of both organic and psychogenic types have been forwarded in the past. An example of a purely organic explanation is uterine retroversion, but one review (Lancet, 1981) believes that evidence now rejects this. An organic mechanism of possible importance is pelvic venous varicosities. The paper by Beard et al.(1984) reported a much higher prevalence of pelvic varicosities in a group of women with chronic unexplained pelvic pain when compared with control samples. A radiological technique was used which was not generally available. Such an organic mechanism could have an aetiology which is either physical or psychogenic. Examples of the former include gravity effects and vasoactive substances as yet unidentified. However, Beard et al.(1984) and the Lancet review (1981) both favoured psychogenic aetiologies while admitting that the exact nature of these can at present only be speculated upon. Abnormal increases in blood flow through the pelvis is one suggested process whereby a psychogenic cause could result in pelvic varicosities which in turn could result in symptoms. Beard et al.(1984) point out that while the association between pelvic varicosities and unexplained pelvic pain seems to be a close one, studies have shown that hysterectomy, which removes or ligates these enlarged veins, is not always effective in

relieving symptoms.

Unexplained back pain

Back pain, usually low back pain, is a very common complaint in Western society (Waddell, 1982). 20%-35% of all new orthopaedic referrals are for this symptom. A large proportion of back pain is caused by organic disorders, and among the remainder, it is often especially difficult to exclude organic factors. Thus, the prevalence of totally 'unexplained' back pain is uncertain. A number of studies have shown that psychiatric morbidity is especially prevalent among those suspected of having non-organic back pain (Main, 1983). Many authors of these studies have concluded that the psychiatric disorders were probable causes of the back symptoms. Waddell et al.(1984a and 1984b) challenged this view in their reports on a study of 200 back pain patients of both organic and non-organic types. This group found that psychological measures, along with the numbers of inappropriate (or non-organic) symptoms and signs, correlated with severity and duration of the back symptoms, and the authors regarded the psychological abnormalities found as consequences rather than causes.

Miscellaneous unexplained symptoms

Fatigue or lassitude is another common complaint in medical settings and one study (Morrison, 1980) indicated that after initial evaluation, a large proportion remains

unexplained. However, Havard (1985), in a recent review, suggested that thorough evaluation nearly always unearths a cause which is organic in approximately 50%, and psychiatric/psychosocial in the remaining 50%.

Unexplained visual disturbance relating to visual acuity or to peripheral vision is said to constitute 1%-5% of ophthalmology practice (Kathol et al. 1983a). Kathol et al.(1983b) traced 42 such patients four years after initial presentation and found that 23 (55%) had remained symptomatic although degree of severity had usually been mild. These authors performed psychiatric examinations and made DSM-III diagnoses. They concluded that psychiatric disorder, predominantly somatisation disorder, was the cause of visual symptoms in the majority, while in the remainder, the process of suggestibility was the most likely cause resulting in symptom reinforcement during eye-testing.

Unexplained dysphonia (Monday, 1983), unexplained chronic perineal pain or prostatodynia (Woodhouse & Rugg, 1984), and dizziness (Luxon, 1984) have also been the subjects of study.

Summary of Chapter 6

Results from primary care and hospital studies suggest that the prevalence of non-organic presentations is high in these settings. In series of patients with gastrointestinal symptoms, non-organic states were found in 44%-84% (Harvey et al. 1983; Macdonald & Bouchier, 1980; Gomez & Dally, 1977; Creed, 1981). In patients undergoing coronary angiography for chest pain, 33% are generally found to have no organic findings (Brandon, 1983), and this figure was 63% in one series of patients undergoing laparoscopy for pelvic pain (Gillibrand, 1981). However, we do not know what proportion of these non-organic presentations would have had psychiatric explanations had thorough psychiatric evaluations taken place. For the remaining 'unexplained' symptoms, we do not know what proportion were prolonged in duration or disabling in severity. Symptoms of short duration and mild severity may not warrant so much further scientific research and may often be expected to remit spontaneously. We do not know what proportion of these symptoms remitted after reassurance was obtained following the negative findings. This group do not display the sort of illness conviction seen in the 'unexplained' disorders which are referred to psychiatric departments. Nor do we know the possible outcome of subclassifying symptoms via the other variables discussed in chapter 5 - symptom course, nature of onset, history of frequent non-organic medical consultations, illness

fear, preoccupation with symptoms.

Indications that non-organic physical symptoms are common and clinically important in hospital practice are provided by the extensive literature describing them. This suggests that the following non-organic symptoms may be seen commonly - head pain at neurology departments, facial pain in dental practice, chest pain and palpitations at cardiology departments, gastrointestinal symptoms at gastroenterology and surgical departments, pelvic pain at gynaecology departments, back pain at orthopaedic and rheumatology departments. Symptoms seen at ophthalmology, ear nose and throat, and urology departments have also been referred to. This list almost certainly does not include all possible non-organic physical symptoms.

Symptom type has been subdivided, for the purpose of this Thesis, into pain, autonomic function, somatic function, and generalised (see chapter 1, page 15). The examination of the literature in this chapter, along with that in chapter 5, may suggest that of the four symptom types, 'unexplained' symptoms are most commonly painful ones, followed in frequency by symptoms of the autonomic function type such as palpitations and bowel disturbance. There have been few references to non-organic or unexplained symptoms of the somatic function and generalised types.

Chapter 7 and chapter 8 will explore, via existing literature, some pathological mechanisms and aetiologies which may contribute to the production of 'unexplained physical symptoms'. This is an appropriate place to repeat a point made in chapter 1 - that the mechanisms and aetiologies which must underlie 'unexplained physical symptoms' can almost certainly contribute to the production of symptoms caused by organic disease and also to those caused by psychiatric illness. Thus, chapters 7 and 8 will examine physical symptom production in general

Table 13. Mechanisms Which May Underlie Unexplained
Physical Symptoms

-
1. Pain perception
 2. Sensory information processing
 - 2.1 sensory perception
 - 2.2 role of neurophysiological attention
 - 2.3 evaluation and attribution
 3. Autonomic nervous system
 - 3.1 direct effects
 - 3.2 skeletal muscle tension
 - 3.3 hyperventilation
 4. Illness behaviour
-

but particular interest will be focused on whether the mechanisms and aetiologies considered can result in physical symptoms in the absence of organic and psychiatric disorders.

1. Pain Perception

Research into pain has flourished over the past 20 years or so, and this has led to a change in its concept. Pain is no longer regarded as a simple sensory pathway, instead is now viewed as a complex entity under a variety of influences, physiological, neurochemical, and psychological (Sternbach, 1978; Bond, 1984). Most workers in this field subdivide pain perception into three components - sensory-discriminative, motivational-affective, and cognitive-evaluative (see Melzack & Dennis, 1978). The sensory-discriminative component is regarded as the one carried by peripheral sensory nerves and spinal tracts. The motivational-affective is said to describe the unpleasant, distressing quality of pain and to stimulate aversive action such as escape. It is postulated that this component is mediated by the reticular formation, the limbic system, and possibly parts of the frontal cortex. The cognitive-evaluative component is said to be a function of cortical, probably frontal cortical, activity.

In 1965, Melzack & Wall (1982) proposed the 'gate control theory'. This theory states that pain perception can be considerably modulated by influences on the dorsal

horns in the spinal cord. These influences can open or close the 'gate' to impulses from peripheral fibres. The most important source of modulation is thought to be descending fibres from the brain. Certain dorsal horn laminae, called the substantia gelatinosa, are thought to be the site of the gating mechanism.

It is now accepted that acute pain and chronic pain should be regarded as separate entities (Melzack & Dennis, 1978; Bond, 1984). Chronic pain is defined as pain which persists for at least six months, or pain which persists after healing of an initial organic lesion has taken place. The biological basis of such chronic pain is not yet understood. Self-sustaining reverberating neuronal circuits which might follow prolonged sensory input such as an initial organic pain, have been proposed (Lorente de No, 1935; Livingstone, 1943; Von Hagen, 1957) but not proven (Melzack & Wall, 1982, chapter 11). It is known that lesions which cause deafferentation such as limb resection are associated with microscopic changes in the proximal ends of the sectioned nerves. These changes could be responsible for abnormal firing patterns (Melzack & Wall, 1982, chapter 8). Some evidence exists to suggest that abnormal neuronal firing patterns could develop in the absence of deafferentation. Melzack & Wall (1982, chapter 11) reviewed this evidence, which is mostly animal-based, and which raises the possibility that an initial intense sensory input such as severe pain could result in subsequent reproduction of that intense input by minor

triggers.

In summary, much further research is required to determine whether or not abnormal neurophysiological processes can result in chronic pain which is presently regarded as unexplained.

Neurochemical mechanisms

A significant advance in the understanding of pain was made with the discovery of the endorphins, endogenous opioid substances mostly found in the brain stem especially around the periaqueductal grey matter in the midbrain. Endorphin release is thought to inhibit pain via descending pathways to the dorsal horns (see discussion above on the 'gate control' theory). Most experimental work in this field on both animals and humans has used stimulus-produced analgesia (SPA)(Cannon et al. 1978; Terman et al. 1984). SPA, using techniques such as transcutaneous nerve stimulation and acupuncture, is thought to be mediated, at least in part, by endorphin release. External stress has also been shown to result in SPA (Terman et al. 1984). It has been suggested that serotonin neurotransmission in the brain stem is of importance to the success of SPA (Terman et al. 1984).

The endorphins are peptide molecules and methionine-enkephalin and leucine-enkephalin have been investigated most. Methionine-enkephalin occupies a position on the larger molecule, beta-endorphin, which in

turn is part of the molecule of the pituitary prohormone beta-lipoprotein. Cannon et al.(1978) referred to some research which has demonstrated low levels of endorphins in cerebrospinal fluid in patients with chronic pain. These authors raised the proposition that chronic pain could be associated with dulled or depleted endorphin function.

Kiser et al.(1983) did not find reduced endorphin levels in their series of 20 patients with chronic unexplained pain, although this group measured endorphin function in plasma. All patients underwent a course of acupuncture which resulted in complete pain relief in 5 and partial relief in 9. Improvements in pain scores correlated closely with percentage increases in plasma methionine-enkephalin. The authors described their results as further confirmation that acupuncture analgesia (a form of SPA) is mediated via endorphin function, and raised the possibility that circulating endorphin may have a role, speculating that a possible source is the adrenal medulla.

The review by Terman et al.(1984) described evidence from animal research which has demonstrated an endogenous non-opioid analgesia system in addition to the endorphin system. The authors admitted that the neurochemistry of the non-opioid system remains elusive but they regarded the histamines as candidates of first choice. The authors pointed out that if treatment methods were to be developed which enhanced the non-opioid system, then

unwanted features of opioid analgesia such as tolerance could be avoided.

Measurement of pain

Pain research is handicapped by difficulties in accurate measurement. Reading (1983) reviewed the methods available which are mostly either subjective or behavioural. Subjective methods include visual analogue scales, questionnaires, and diaries. The most widely used questionnaire is the McGill Pain Questionnaire which attempts to measure separately the sensory and affective components of pain. Subjective methods carry the potential limitations of bias in reporting, uncertainty that verbal reporting of pain accurately reflects the perception of pain, the possibility that the act of self-measuring the pain alters the perception of that pain (the Heisenberg principle), and difficulties in taking into account short-term fluctuations in pain. Furthermore, individuals use pain language differently. Kremer & Atkinson (1984) carried out a factor analysis on a large number of responses using the McGill Pain Questionnaire and found considerable inter-subject variation in the language used, especially for terms describing the motivational-affective component.

Behavioural measures can be applied to the following three categories of pain behaviour - medical action such as medical consultation or use of medication; impaired functioning in terms of mobility, occupation, personal

relationships; verbal complaints, moaning, facial expression. There exists some controversy as to the most valid methods of pain measurement, but some have suggested that behavioural measures may be the most relevant in chronic pain, while subjective methods the most valuable in acute pain (Reading, 1983). Reading concluded that greater validity of behavioural measures needs to be sought, and in the meantime, as many pain measures as possible, from different response channels, should be used in research designs.

Laboratory methods have been used for many years to study pain perception. Stimuli such as electricity and radiant heat have been used. Such methods produce measures of pain threshold, pain tolerance, and the tolerance/threshold difference (sometimes called pain sensitivity). Pain threshold is believed to depend mostly on the sensory component of pain, while tolerance depends on all three components and is therefore more difficult to measure reliably. There is controversy as to whether laboratory-induced pain can be used as an indication of sensitivity to clinical pain (Reading, 1983). Critics argue that the affective and evaluative components of clinical pain are not assessed in laboratory settings, and also that laboratory-induced pain can never reach the severity of clinical pain for ethical reasons. Advantages of the laboratory are the control over the influencing variables which is provided, and the ability to quantify the pain stimulus. The history of laboratory methods of pain measurement was

reviewed by Wolff (1978). Wolff described the latest laboratory method which is based on sensory-decision theory (SDT) which forms part of the field of new psychophysics. This theory is based on the need to include background noise (of the sensory kind) in any measurement method, and the method measures the ability to detect weak signals over this background noise. SDT has been used mostly in the study of auditory and visual perception, but has recently been applied to pain perception. The method produces a measure of sensory-discrimination and also a measure of 'response bias' which is an assessment of strategy, that is, how much guessing is used in the attempt to improve 'hit rate'. The method has been used to show that placebo tends to influence response bias but not sensory-discrimination, while the opposite has been found for analgesic drugs and acupuncture. SDT principally measures the sensory component of pain perception, not the affective and evaluative components, and has been consequently criticised as not being relevant to clinical pain perception. But these criticisms are answered by those who believe it is helpful to separate the sensory component from the others when investigating pain (see Chapman, 1978).

Chronic pain and depression

The debate surrounding the relationship between chronic pain and depression was discussed in chapter 5. It is clear that an association between the two exists,

but it is not clear whether this association is causal or independent, and if causal, what the direction of causality is. Links between pain and depression could involve serotonin neurotransmission (Ward et al. 1982) and endorphin function (Cannon et al. 1978). Serotonin neurotransmission is believed to be involved in stimulus-produced analgesia (SPA)(Cannon et al. 1978) - it is also one of the two neurotransmitters most suspected of underlying depressive illness. Some antidepressant drugs possess serotonin reuptake inhibiting properties, and there is some provisional evidence that these drugs can improve chronic pain (Roy et al. 1984). There has been the suggestion that this effect on chronic pain can occur independently of any effects on depression.

It has been suggested that depleted endorphin function can be found in chronic pain (Cannon et al. 1978). Endorphins, being opiate substances, can cause mood elevation as well as analgesia, so the impairment of this mood elevating response could be associated with depression. One important stimulus to endorphin function could be regular and rewarding behaviour, the type of behaviours often suppressed by both chronic pain and depression.

2. Sensory Information Processing

2.1 Sensory Perception

Neurophysiological sensory perception, that is, receptor activity and neural transmission to the brain, has been studied mostly in the visual and auditory modalities. There are those who wonder whether some of the principles of visual and auditory perception should not be applied to the investigation of pain (see Chapman, 1978). For example, one well-known phenomenon in sensory perception is 'constancy', a perceptual stability which remains even if parts of the stimulus are removed - could this phenomenon occur in chronic pain?

Petrie (1978) examined the relationship between sensory perception and pain perception. She proposed the model of augmentation/reduction whereby some individuals tend to augment sensory stimuli while others tend to reduce them. Petrie termed this phenomenon 'perceptual reactance'. She predominantly studied tactile perception, but she proposed that perceptual reactance applied to all sensory modalities. It was later discovered that 'reactance', measured as a sensory response, was reflected by reactance with EEG evoked potentials (Buchsbaum, 1978). Thus, augmenting subjects displayed amplitude increases with an increasing sensory stimulus, while reducers reached a stage when amplitude

started to decrease despite an increasing stimulus. These findings led to the belief that augmentation/reduction was a cerebral process. Petrie (1978) wondered whether augmenters would augment pain perception and described her own experiments which indeed demonstrated a correlation between augments status and low pain tolerance. This is a finding which has been replicated using EEG methods (Buchsbaum, 1978). The possible clinical relevance of this finding was suggested by one small unpublished study, to which Petrie (1978) referred, in which augments status was associated with higher scores on the hypochondriasis subscale of the MMPI. Individuals who display the introversion personality trait (usually measured on the Eysenck Personality Inventory) are known to tend towards lower pain tolerance. In an experiment on healthy volunteers, Petrie (1978) found an association between introversion and augments status, in keeping with the fact that both have been associated with lower pain tolerance.

Petrie also described experiments demonstrating that augmentation and reduction were not fixed and that one mode could change to another. Among several examples, she described experiments showing that aspirin and stimulus-produced analgesia (SPA) tended to alter an augmenting pattern to a reducing. This change would be in keeping with the higher pain tolerance which analgesic methods provide.

Von Knorring et al.(1979) examined the relationship

between augmentation/reduction (using visual evoked potentials) and endorphin function (methionine-enkephalin in cerebrospinal fluid) in 45 patients with chronic pain. They found that augmenters (the group known to have lower pain tolerance) had significantly lower endorphin concentrations.

In summarising the above work, which is acknowledged as being preliminary, there may be associations between augmentation, lower pain tolerance, reduced endorphin function, and the introversion personality trait. Work on augmentation/reduction has continued but in a recent review, Prescott et al.(1984) pointed out that methodological considerations still require clarification before reliable and non-conflicting data can be obtained - these authors referred to EEG electrode placement, methods of measuring wave forms, among others.

Another study (Hanback & Revelle, 1978) found an association between perceptual sensitivity and a hypochondriasis score, similar to the finding described by Petrie (1978). These authors used a visual test, the two-flash fusion test. Hanback & Revelle pointed out that in their study, and in others, autonomic arousal was not controlled for. Autonomic arousal is known to increase perceptual sensitivity and reduce pain tolerance. Some studies have shown an association between introversion and increased autonomic arousal which could explain introversion's association with lower pain tolerance, an association attributed by Petrie

(1978) to augment status.

2.2 Role of Neurophysiological Attention

Attention, referred to here as a neurophysiological process, has important influences on sensory perception. If more attention is directed to a particular sensation then that sensation is perceived with greater intensity. The figure-ground theory states that the nervous system is constantly scanning its perceptual field, usually at the subconscious level, and pays attention only to what seems relevant. This theory of attention has been used to explain perceptual differences between individuals, and one author (Chapman, 1978) suggested that it could be applied to explain differences in pain perception. 'Vigilance' refers to the readiness to select and pay attention to a specific sensory stimulus. Chapman (1978) believes that vigilance can be strongly influenced by past experience, so that in some individuals attention to pain, or to certain pains, could arise too readily. It is believed that the amount of perceptual information, from both the internal state and the external state, that can be processed at any given moment has a finite limit (Navon & Gopher, 1979). Pennebaker (1982) based some experiments on this theory by investigating 'competition' between sensory stimuli arising from external and internal sources. The author accepted that assessment of attention to internal stimuli is difficult. With normal subjects, Pennebaker demonstrated that physical performance was greater while running on a cross-country

course than on a racing track - he postulated that the greater amount of external stimuli found on a cross-country course had limited the amount of internal perception on fatigue and pain that could be processed. Subjects undertaking an undemanding task were better able to detect subtle skin stimulation (a test of internal attention) than those carrying out a demanding task. Coughing rate, another possible measure of internal attention, was found in experiments to be greater during boring parts of a motion picture than during interesting parts. Pennebaker speculated that the 'competition of cues' process could be one explanation of the higher symptom reporting rates among groups such as the unemployed and those living alone, who may experience less external stimuli than others.

A neuropsychological basis for this competition of cues phenomenon was discussed in a review by Miller (1984). Miller referred to the well-known animal work of Hernandez-Peon et al.(1956) in which evoked potentials caused by a stimulus in one sensory modality could be attenuated by stimuli in other modalities. Miller also referred to studies which have demonstrated reduced parietal evoked potentials when a limb, which was the site of conversion anaesthesia, was stimulated. It has been proposed that corticofugal tracts can selectively inhibit the perception of sensory stimuli via the attention mechanism, and that this could be the basis of conversion disorder (Ludwig, 1972). Ludwig (1972) also hypothesised that in other non-organic symptomatic states

attention becomes 'locked' onto the symptoms - this leads to a reduction in corticofugal inhibition thus allowing even greater perceptual sensitivity to incoming stimuli - a positive feedback cycle becoming established. It has long been believed that the brain stem reticular formation is at the centre of the attention mechanism, but Miller (1984) reviewed evidence which points to a role for the higher cerebral structures. It is known that certain lesions of the non-dominant hemisphere can cause neglect to the contralateral side, which is usually the left side of the body. It is known that many physical symptoms - conversion symptoms, non-organic pain, organic pain - are more commonly found on the left side of the body. This laterality has also recently been demonstrated for symptoms caused by hyperventilation (Blau et al. 1983). This and other evidence has been used to suggest that the right hemisphere plays a particularly important role in mediating attention on sensations coming from the body. It is also believed that the right hemisphere plays an important role in mediating the motivational-affective aspects of sensations such as pain.

Language is predominantly a function of the left or dominant hemisphere. For emotional matters to be verbally expressed, integration of right and left hemispheric function might be required. Miller (1984) referred to work which suggests that this integration can become impaired in individuals who are not good at

verbally expressing feelings (alexithymia) and that such individuals might then express emotion via purely 'right hemispheric' means which could lead to attention mechanisms focusing on somatic sensations. The author emphasised how preliminary these theories are. Miller proceeded to examine the theoretical considerations that could implicate the second somatosensory area in the genesis of somatoform disorders. The cortical representation of the second somatosensory area lies in the Sylvian fissure adjacent to the insula. Sensory input from the body is less discrete than to the primary somatosensory area in the postcentral gyrus. Miller concluded his review by raising the question as to whether certain neuropsychological characteristics, perhaps found in certain personality types, might place individuals at risk of developing somatoform disorders, and suggested that this area is worthy of much further research.

2.3 Evaluation and Attribution

When bodily sensations are consciously perceived they are evaluated in the light of general knowledge, prior experience of similar sensations, availability of an explanation, among others. The sensation might be attributed to a trivial condition or to something potentially more serious. Mechanic (1972) has reviewed this aspect of sensory information processing and has suggested that the evaluation process is another source of inter-person variation in symptom perception.

Mechanic postulated that many unexplained symptoms could originate in normal sensations, such as those caused by autonomic arousal, which are wrongly attributed to disease. A predilection towards such misattribution, described as an 'amplifying somatic style', is regarded by Barsky (1979) and Barsky & Klerman (1983) as a plausible cause for some unexplained symptoms. Rodin (1978) pointed out that the attribution process has not been the subject of systematic research in medicine, although also pointed to the difficulties in reliably measuring this.

In experiments on normal volunteers, Pennebaker (1982) demonstrated the potential for the attribution process to work incorrectly. As a model, this author suggested that once attribution had occurred (and this could be an attribution set to which the individual had a predilection, such as fear of illness), then the perceptual processes could carry out selective searches for confirmatory evidence. Thus, subjects told that the ultrasound stimulus which they were about to receive would raise skin temperature did indeed report increased perception of heat, when in actuality skin temperature did not change. And subjects told that 'flu was around' reported more physical symptoms than those not told this.

3. Autonomic Nervous System

3.1 Direct Effects

Autonomic arousal can result in a number of physical sensations such as palpitations, diarrhoea, tremor, and autonomic arousal is a well-recognised mechanism whereby anxiety states can cause physical symptoms. The purpose of including the autonomic nervous system in this section is to consider whether occult autonomic arousal, in the absence of obvious anxiety or environmental stress, can result in symptoms which at present appear unexplained. Hill (1982) suggested that such a process is possible and pointed out that patterns of sensations arising from autonomic arousal differ from individual to individual, which can cause diagnostic difficulties. Mechanic (1972) and Pennebaker (1982), in their discussion of the evaluation/attribution process as applied to unexplained symptoms, suggested that the initial sensation leading to the incorrect interpretation could be the result of autonomic arousal. Little systematic investigation seems to have occurred to try and confirm this.

Panic disorder is defined in DSM-III as episodic anxiety (see chapter 4, page 46), the anxiety being defined in terms of both mental and physical symptoms, and it is believed that episodes often occur apparently unconnected with environmental stress (American

Psychiatric Association, 1980). Panic disorder has been considered to be an endogenous condition rather than one reactive to environment (Snaith, 1983), perhaps associated with the affective disorders (Breier et al. 1985). Miller (1984), in his review of possible neuropsychological foundations of the somatoform disorders, pointed out that the autonomic arousal process has links with the attention process, and like the attention process, may have its most important source in the limbic system of the non-dominant hemisphere. Some evidence of biogenic mechanisms comes from work such as that of Liebowitz et al.(1985) who found that panic attacks were induced in 31 out of 45 patients with panic disorder by lactate infusion compared with 0 out of 20 normal comparison subjects. A variety of biochemical changes occurred in the panic disorder group and some of these involved elevated plasma catecholamines, a mechanism long suspected of being involved in panic disorder. But as Liebowitz et al. pointed out, plasma catecholamines are technically very difficult to measure, and their role in panic disorder has probably yet to be resolved. This group did not conclude that panic disorder is a purely endogenous/biogenic condition - they postulated that the biogenic mechanisms act only to trigger panic attacks when there is a baseline of sustained and psychologically-induced autonomic arousal.

Panic disorder, as presently defined in DSM-III, cannot be applied to physical symptom patterns only. Mental symptoms such as apprehension are required by the

diagnostic criteria. Panic disorder-like states involving physical symptoms only could be worthy of further investigation in connection with 'unexplained physical symptoms'.

Autonomic influences are sometimes classified as tonic and clonic. Tonic refers to a sustained change, clonic to the potential to hyper-react to a given external stimulus. The clonic autonomic effects may be worthy of further research with regard to 'unexplained' symptoms. It has already been demonstrated that some individuals with irritable bowel syndrome have colonic smooth muscle which hyper-reacts to distension. It is known that some individuals, especially those who may be at risk of developing hypertension, have circulations which over-react to stimuli despite the presence of a normal baseline blood pressure (the tonic state)(Steptoe et al. 1984). Of course, such data need not be interpreted as demonstrating abnormal autonomic activity - hyper-reactivity could reflect abnormalities confined to the target tissues themselves.

3.2 Skeletal Muscle Tension

Muscle tension is an acknowledged effect of autonomic activity. Consequently it can be caused by anxiety states, when a variety of musculoskeletal complaints along with temporal headache can occur. The possible role of muscular tension as a mechanism in leading to unexplained physical symptoms has been considered by some

writers (Hill, 1982; Merskey, 1984), but has not been systematically investigated. Hill (1982) pointed out that the patterns of muscular tension in response to arousal vary between individuals, which could make recognition more difficult.

3.3 Hyperventilation

The possible role of chronic hyperventilation has attracted much research in recent years. Recent reviews include Magarian (1982) and the Lancet (1982). Chronic hyperventilation leads to reduced arterial pCO_2 . This can be found on baseline measurements but is often only found when an acute stressor is superimposed. The principal effects of reduced pCO_2 is cerebral vasoconstriction, reduced availability of oxygen in haemoglobin, increased irritability of sensory, motor, and autonomic nerves, and bronchial constriction. These effects may be behind the many symptoms which hyperventilation is said to produce - faintness, paraesthesiae, muscle stiffness, palpitations, chest pain, sweating, and fatigue, among others. Magarian (1982) called for further biochemical research. Some objective confirmation of the presence of hyperventilation can come from spirometry, voluntary over-breathing, and the measurement of end-tidal pCO_2 following stress testing (Lum, 1981). Spirometry might reveal an increased respiratory rate, irregular tidal volume, periodic deep sighing, and the excessive use of the thoracic cage. Voluntary over-breathing of only 2-3

minutes can reproduce the presenting symptoms. But the most reliable method is the measurement of end-tidal pCO₂ which can be performed on expired air sampled at the mouth using an infra-red analyser. The fall in end-tidal pCO₂ produced by stress testing which occurs in normal subjects recovers within minutes, but is much slower to recover in those with chronic hyperventilation. Sufferers of intermittent hyperventilation may require measurement of end-tidal pCO₂ by ambulatory methods before diagnosis is reached (Bass & Gardner, 1985). What seems to have been established is that symptom profiles alone cannot diagnose hyperventilation reliably (Grossman & de Swart, 1984).

The term hyperventilation syndrome has come into use which may be premature given that clinical syndromes associated with hyperventilation have not yet been clearly identified. In using this term, Lum (1981) forwarded the view that over-breathing is the primary abnormality and is caused by bad breathing habits, but this view awaits confirmation. An increased respiratory rate is a very common sequel to autonomic arousal and is therefore seen in some patients with anxiety. It remains to be established whether or not some hyperventilation states are secondary to occult autonomic arousal, therefore adding to the range of autonomic effects which have been reviewed in this section. A feature which may distinguish hyperventilation from the other autonomic mechanisms is that it can be self-perpetuating. Persistent reduction in pCO₂ is thought to lead to a

change in the set of the respiratory centre in the brain stem, so that a rise of pCO₂ into the normal range will be read as hypercapnia and compensatory over-breathing will result.

4. Illness Behaviour

Objective behavioural changes which can follow symptom perception include the following - verbal complaints, facial grimacing, impaired daily functioning, the taking of drugs, and the seeking of medical help. For unexplained symptoms where there is no objective pathology, objective behavioural changes should correspond to subjective symptom perception, disability should reflect distress. However, behaviour can be the focus of reinforcing influences which have no effect on perception, and it is thought possible for behavioural changes of illness to become enhanced in the absence of changes in symptom perception, the behaviour becoming operant rather than respondent (Fordyce, 1978). Thus, behaviour could act as a mechanism whereby 'unexplained physical symptoms' are produced. Clear-cut behavioural reinforcement has already been discussed in relation to 'explained' physical symptoms (chapter 4). Its inclusion in the present section refers to occult behavioural influences, a situation which may be more common.

Summary of Chapter 7

This chapter has examined poorly-understood mechanisms which could in theory contribute to the production of 'unexplained physical symptoms'. Further research is needed. A better clinical syndromal classification of the disorders consisting of 'unexplained physical symptoms' will be required before the above mechanisms can be properly investigated.

The following mechanisms have been discussed - disorders of pain perception; abnormal neuronal firing patterns in chronic pain states; impaired endorphin function; reduced serotonin neurotransmission; augmented perceptual reactance as measured by sensory methods or by EEG evoked potentials; dysfunction of the attention mechanism, either based on primary neuropsychological abnormalities or on the lack of competing sensory stimuli; disorder of the evaluation/attribution process; autonomic arousal, its direct effects, and possible effects in inducing skeletal muscle tension and hyperventilation; and finally, behavioural mechanisms. The mechanisms concerning perception, including those of attention and evaluation/attribution, could have an influence by reducing pain and sensation tolerance. The motivational-affective component of pain perception may be the one most vulnerable to outside influences as it seems to be associated with the greatest inter-subject

variation (Kremer & Atkinson, 1984). The mechanisms involving autonomic function could cause symptoms directly. These two groups of mechanisms overlap. Hence, autonomic arousal can lead to increased perceptual sensitivity, can enhance attention on a given stimulus, and can influence the attribution process. In turn, impaired pain tolerance, if this results in pain, can lead to autonomic arousal, as could the attention and attribution mechanisms should sensations become the focus of preoccupying attention or fear of illness.

Even if the above mechanisms were shown to be important, it would remain to be established whether or not they were mediating primary independent syndromes in the absence of psychiatric illness.

In chapter 6 the wide range of severity of 'unexplained' physical symptoms was discussed. This ranged from prevalence rates of up to 90% for minor physical symptoms in community samples, to the smaller proportion of individuals who attend primary care with physical complaints, to the much smaller number of patients attending hospital medical clinics with 'unexplained' symptoms, and to the even smaller numbers with chronic unexplained 'disorders' of the types for which psychiatric referral might be made. One could speculate that different mechanisms, from the list above, could have different roles in these diverse settings. To give some highly speculative examples, augmenting perceptual reactance could perhaps only influence minor

symptom production in the community, while endorphin dysfunction, attention disorder, or hyperventilation could be involved in the persistent 'unexplained' states.

PHYSICAL SYMPTOMS

Aetiologies in medicine can be subdivided into the biological, psychological, and sociological. Aetiologies can also be separated into predisposing, precipitating, and perpetuating. These two forms of classification are used in Table 14 to list the aetiologies which will be discussed in this chapter.

Table 14. Possible Aetiologies Involved in Unexplained Physical Symptoms

	Pred.Prec.Perp.*		
1. Biological			
1.1 Gender	+		
1.2 Age	+		
1.3 Personality	+		+
1.4 C.N.S. Disorder	+		+
2. Psychological			
2.1 Psychodynamics	+		
2.2 Affective Disorders		+	+
3. Sociological			
3.1 Cultural Factors	+		+
3.2 Life Events		+	
3.3 Learning	+		+

*Pred.= Predisposing

Prec.= Precipitating

Perp.= Perpetuating

1. Biological Aetiologies

Biological aetiologies are either inborn and therefore most likely to be genetically determined, or environmental in the form of physical agents. By my definition, the latter have been excluded in connection with 'unexplained physical symptoms'. Inborn causes of unexplained symptoms could include gender, age, personality, and abnormalities in the central nervous system. It is appreciated that personality is not entirely inborn but constitutional factors are probably the most important, so it will be included here. Inborn aetiologies are usually of the predisposing type, but can also be perpetuating.

1.1 Gender

Female sex may predispose towards 'unexplained physical symptoms'. The only concrete evidence concerns somatisation disorder (DSM-III) which has been said to affect 1%-2% of American women but to be rare in men (American Psychiatric Association, 1980; Woodruff et al. 1971). All other evidence is suggestive only and concerns the consistent finding that women report more ill-health than men yet display lower mortality rates for most diseases. This finding has been made in community surveys (for example, Hannay, 1979; Hunt et al. 1984), primary care studies (for example, Ingham & Miller, 1982), and in studies carried out specifically to investigate sex differences in the perception of illness

(Briscoe, 1978). Consumption rates of prescribed drugs and hospital admission rates are all greater in women (Nathanson, 1977). It should be pointed out that most studies in this field have excluded pregnancy-related conditions (Nathanson, 1977). These findings are mostly based on global data. Thus, organic complaints have usually been included. However, given the very high prevalence rates for physical symptoms in the community and in primary care, most symptoms surveyed will almost certainly have been non-organic. Also, psychiatric symptoms will usually have been included, and here, female preponderance is not in doubt. Methodological limitations concerning data collection have been emphasised by recent reviewers (Nathanson, 1977; Mechanic, 1978; Gove, 1984). It is believed that sex differences in ill-health remain to be clarified. This must certainly be true of 'unexplained physical symptoms'. Two interpretations have been made of the female preponderance which has been demonstrated so far - differences in symptom perception and differences in symptom reporting. Mechanic (1978) believes that existing data favour the latter explanation, that women express distress more readily. It has been proposed that this greater willingness to report symptoms and adopt the sick role is culturally determined (Nathanson, 1977), but no proof of this yet exists.

1.2 Age

There is no existing data on the effects of age on

'unexplained' physical symptoms. Symptom reporting in general has been shown to rise with age (Hannay, 1979; Ingham & Miller, 1982; Hunt et al. 1984), but organic disease also shows this pattern, so conclusions concerning unexplained symptoms cannot be made.

1.3 Personality

Personality is a complex entity and is notoriously difficult to measure reliably. Furthermore, it cannot be assumed that measures of personality made after symptom onset have not been influenced by the symptoms and their consequences. Personality traits have been studied in relation to physical symptom reporting, but studies have generally not differentiated symptoms of organic, psychiatric, and uncertain origins.

One of the most widely used personality inventories is the Eysenck Personality Inventory (EPI)(Eysenck & Eysenck, 1964). This gives measures of extraversion/introversion and neuroticism. Subjects scoring in the introversion range have been shown to have lower pain tolerance (Bond, 1981; Petrie, 1978), while those scoring in the extraversion range have been shown to complain of pain more readily to others (Bond, 1981). On the other hand, the EPI was used in several of the clinical studies described in chapter 5, most of which compared samples of patients with non-organic and organic symptoms, and differences on the extraversion/introversion scores were never found. Many

investigations have demonstrated an association between neuroticism scores and symptom reporting (Bond, 1981), but high neuroticism scores may often be an effect of symptoms because symptom relief can be associated with reductions in scores.

Other personality traits which have been suspected of predisposing towards physical symptom reporting are the obsessional trait (Bond, 1984; Lloyd, 1977), the dependent trait (Lloyd, 1977; Elton et al. 1978), proneness to anxiety (Bond, 1984), the cyclothymic trait resulting in dysthymic phases (Bond, 1984), and the histrionic trait (Bond, 1984). Histrionicity results in an over-dramatised style of communication - this trait is known to correlate highly with extraversion as measured on the EPI. The hypochondriacal personality trait (Bond, 1984) is not widely accepted. It refers to a consistent tendency to worry excessively about personal health. It is not clear if there is a relationship between this characteristic and the type of bodily preoccupation that leads to elaborate diets, physical fitness regimes, etc. (Barsky & Klerman, 1983). Some less well-known personality traits have been investigated. Field-independent individuals have been shown to have less pain tolerance than field-dependent (Adler & Lomazzi, 1973), and sensitizers, on the repression-sensitization scale, have been shown to be more prone to developing physical symptoms and to seeking medical consultation (Byrne et al. 1968).

Perhaps the personality trait which has been most widely investigated in connection with non-organic symptom reporting is 'alexithymia'. This term was only coined in 1972 (Sifneos, 1972) and was derived from the Greek words meaning "lack of words for emotions". Alexithymia describes impaired ability in the verbal expression of emotion, which is thought to reflect impaired ability in the conscious experiencing of emotion. Affected individuals display a literal, non-symbolic form of thinking, their inner feelings, wishes and drives are not easily revealed, dreaming is rare, and the ability to fantasise slight - they show difficulties in recognising and describing their own emotions, and have difficulties in discriminating between emotional states and bodily sensations. Almost all published work on alexithymia has originated in the U.S.A. (examples are, Taylor, 1984; Lesser & Lesser, 1983; Gardos et al. 1984). Most authors have expressed caution about the reliability and validity of existing methods of measurement, but there is thought to be enough evidence in support of validity to warrant further research (Taylor, 1984). Initially, interest centred on the hypothesis that, if the powers of recognising and expressing emotion were impaired, might inner distress be more likely to be expressed via bodily symptoms. But to date, there is no conclusive evidence linking alexithymia to the aetiology of 'unexplained' physical symptoms. Speculation as to the cause of alexithymia has centred on neuropsychological defects and on psychological defence mechanisms, with most authors (Taylor, 1984) favouring

the former. Right hemisphere dysfunction, or the impairment of communication between the hemispheres, has been forwarded as possible neuropsychological defects responsible for alexithymia (Miller, 1984).

1.4 Central Nervous System Disorders

There is no existing evidence to implicate C.N.S. disorders in the causation of 'unexplained' physical symptoms. But the review of pathological mechanisms in chapter 7 raised the question as to whether some mechanisms may originate in primary or endogenous disorders of the brain. Thus, disorders of attention have been hypothesised as involving right hemispheric dysfunction (Miller, 1984). Endogenous autonomic arousal causing panic disorder-like syndromes has been suspected (Snaith, 1983; Jones, 1984). Endogenous serotonin deficiency is thought to occur in depressive illness - could this also cause non-organic pain? Other pathological mechanisms which could theoretically involve C.N.S. pathology are sensory perception, pain perception, endorphin function, and the evaluation/attribution process.

2. Psychological Aetiologies

2.1 Psychodynamics

Predisposition to non-organic physical symptoms based on psychodynamic theory has been forwarded by many

authors, most notably Engel (1959). Among current advocates are Blumer & Heilbronn (1982 and 1984) who describe what they call 'pain-prone disorder'. This includes a predisposition in the form of 'unbearable guilt and anguish' which is unresolved. The prominent psychodynamic theories in this field were reviewed by Barsky & Klerman (1983). One, which has been based on the writings of Freud, proposes that unresolved anger and hostility can be transformed into physical symptoms. Another is based on the views of Sullivan and proposes that physical symptoms act as an ego defence against low self-esteem because it is more tolerable to feel that something is wrong with the body than with the self. Some recent commentators writing about unexplained pain have pointed to the lack of reliable scientific evidence supporting these psychodynamic theories (Williams & Spitzer, 1982; Turk & Salovey, 1984).

2.2 Affective Disorders

As precipitating causes of physical symptoms, overt or occult, depressive illness and anxiety states have already been discussed. Such symptoms could be regarded as carrying a 'psychiatric explanation'. However, could depression and anxiety act as perpetuating causes for symptoms which otherwise seem unexplained? It is accepted that physical symptoms, whatever their origin, can result in depression and anxiety (Lloyd, 1977; Roy et al. 1984). Could such an affective change perpetuate symptoms which would otherwise have resolved? Indeed,

depression and anxiety could even enhance the perception of symptoms, via some of the mechanisms discussed in chapter 7, which might then worsen the depression or anxiety, and so on - the creation of a vicious cycle. Much of the literature which has attempted to explain non-organic symptoms in terms of psychiatric illness has not separated precipitating causes from perpetuating, a distinction which might be worth making.

3. Sociological Aetiologies

3.1 Cultural Factors

Sociocultural factors which could contribute to the causation of 'unexplained physical symptoms' include ethnicity, social class, educational status, and marital status. These factors would be most likely to operate as predisposing causes, but could act as perpetuating causes. A certain amount of research has examined these factors in relation to all physical symptoms (see Mechanic, 1972), but there has been little systematic research which has investigated their role with 'unexplained' physical symptoms.

It is well-known that there are ethnic differences in physical symptom prevalence rates. An early investigation into this was the famous study of Zborowski (1952) who investigated reactions to pain in four American ethnic groups. Jewish and Italian groups were found to respond to pain with much emotional language,

Old Americans were more stoical, and Irish Americans often denied pain. Italian subjects primarily sought relief from pain, while Jewish subjects were mainly concerned with the meaning of the pain and its prognosis. Other studies have demonstrated ethnic differences in the willingness to accept psychological explanations for physical symptoms (Mechanic, 1972). It is not clear whether these ethnic differences are mediated via symptom perception, symptom evaluation, or symptom reporting (Mechanic, 1972). Kleinman et al.(1978) believe that all three components of symptom production can be culturally influenced and presented some supporting evidence.

There is some evidence that symptom reporting rates are higher in lower social classes and in those of lower educational status (Hannay, 1979; Ingham & Miller, 1983). Mechanic (1972) suggested that members of these groups are more likely to express emotional distress via bodily symptoms. Marital status has also been associated with symptom prevalence rates with the divorced, separated, and widowed having been shown to have higher rates than the married or single (Hannay, 1979; Ingham & Miller, 1983).

3.2 Life Events

Life event research has become common in recent years with the development of reliable rating scales (Paykel, 1983). Available methods are still handicapped however by the need to rely on retrospective information.

Stressful life events can act as precipitating causes of symptoms. The role of life events in causing psychological symptoms is well established, but their role with physical symptoms is less clear (Ingham & Miller, 1982; Connolly, 1985). Two studies have examined life events in relation to unexplained physical symptoms. Creed (1981) investigated young adults with abdominal pain which warranted appendicectomy. 63 subjects with acutely inflamed appendices on histology were compared with 59 with non-inflamed appendices. Total numbers of life events during the 13 weeks prior to symptom onset were not different. But the non-inflamed group had a significantly higher proportion (59%) with events rated as severely threatening than the inflamed group (25%). Creed concluded that these severe life events were directly causal of the abdominal pain in some individuals, while in others, the association was mediated by depressive illness. Ford and colleagues (Ford, 1985) investigated 64 referrals to a medical clinic with abdominal symptoms and assessed anxiety-provoking life events. The series was subdivided into organic and non-organic groups. The non-organic group had more life events prior to symptom onset (35% v 12.5%) although this difference just fell short of statistical significance. However, detailed statistical analysis failed to reveal a direct causal influence of life events on the symptoms - the life event effect seemed to be always mediated via psychiatric illness.

3.3 Learning

Learning processes have been considered to be important in the genesis of physical symptoms. These include the learning from past experience and from modelling on others, factors which could act as predisposing causes towards physical symptoms. And learning processes can also act as perpetuating causes if the behaviour which surrounds symptoms is reinforced.

Learning based on modelling could contribute to the explanation of the cultural differences in symptom rates which were discussed above (Mechanic, 1972). These processes could also explain why some families have higher prevalence rates for painful symptoms than others (Craig, 1978). The influence of modelling has been supported by studies on tension headache (Turkat et al. 1984) and non-organic abdominal pain (Gomez & Dally, 1977), although was not found in one other study on non-organic abdominal symptoms (Macdonald & Bouchier, 1980).

The role of operant learning as a perpetuating cause has already been referred to, both for 'explained' symptoms (chapter 4) and 'unexplained' symptoms (chapter 7). Fordyce (1978) argued that reinforcement of illness behaviour can arise directly, for example sympathetic attention, or indirectly, for example from avoiding

unpleasant duties as a result of symptoms (avoidance learning) or from the discouragement of well-behaviour by relatives (punishment). Fordyce stated that avoidance learning in particular has long been regarded as highly persistent. Three examples of operant learning will be emphasised here. The first concerns differences in verbal communicating styles which may mean that some individuals are more likely to report their physical symptoms to others or to describe their symptoms with more intensity (histrionicity)(Bond, 1981). The actions of those receiving such reports, and this would include doctors, could reflect a symptom level more severe than the true level, and could then reinforce the patient's illness behaviour. The second concerns the influence of chronicity on the perpetuation of symptoms. At a certain stage of symptom duration, behavioural changes may become fixed because of the constant reinforcing influence of the environment - family, friends, employers, etc. In other words, the symptom behaviour becomes an ingrained habit. In many of the clinical studies described in chapter 5, symptom duration was of several years, so the perpetuating influence of chronicity itself may have been important in these series. The third issue concerns iatrogenicity - the reinforcement of physical symptoms by doctors who are reluctant to use non-organic diagnoses, who fail to reassure adequately, or who persist with repeated investigations in order to exclude organic disease with all possible certainty. Such iatrogenic effects have been considered by several authors (for example, Kreitman et al. 1965; Mayou, 1976; Lloyd, 1983) but have not been systematically investigated.

Summary of Chapter 8

Some provisional findings and propositions concerning aetiologies which could be involved in 'unexplained physical symptoms' have been described. Clearly, much further research is needed. Biological, psychological, and sociological causes have been discussed. Among possible biological causes, causes which would be expected to act via predisposition or perpetuation, constitutional abnormalities of the central nervous system and the phenomenon of alexithymia may have roles to play. Possible sociological causes include cultural factors, learning, and stressful life events. Certain sociocultural factors may have predisposing influences. The role of learning in the form of the perpetuating effects of symptom behaviour reinforcement has been emphasised. These behavioural influences are likely to increase in importance with increasing symptom duration. Thus, if unexplained symptoms are persisting for a certain length of time, and I would suggest 6-12 months, then vigorous efforts towards evaluation and treatment should probably be made to avoid the development of chronicity (Aldrich, 1981). Stressful life events are likely to act as precipitants for a proportion of 'unexplained' physical symptoms and some evidence of this already exists (Creed, 1981; Ford, 1985).

Aetiologies were tentatively subdivided into predisposing, precipitating, and perpetuating. One of these forms of aetiology could be known or explained, while another is unexplained. The distinction between

these different forms of aetiology may not have been emphasised enough in previous research in this field. Thus, symptom precipitation may be understood - this, for example, could involve an acute organic disorder or an acute psychiatric disorder such as anxiety - but symptom perpetuation is difficult to explain and may concern some of the aetiologies described in this chapter. Or, symptom perpetuation may be understood - examples could include reinforcement of illness behaviour, or the effects of depression or anxiety - yet symptom precipitation remains a mystery. In this situation, symptom precipitation could have been due to a minor undetected organic disorder, to autonomic arousal, or to the so-called normal bodily sensation (Mayou, 1976) and not be of particular importance. In such a patient it would then not be necessary to search for a psychological precipitant with which to explain to the patient the onset of the symptoms, explanations which many patients often reject.

Even although 'unexplained' physical symptoms have not been adequately classified, and even although much remains to be discovered concerning mechanisms and aetiologies, there exists a fairly large amount of published empirical research on treatment. Some treatment studies have specifically focused on unexplained symptoms, while others have not differentiated between symptoms of organic, psychiatric, and uncertain origins. The treatments briefly discussed in this chapter are listed in Table 15.

Table 15. Treatments Which Have Been Explored for
Unexplained Physical Symptoms

1. Physical Therapies

1.1 Drug therapy

1.2 Stimulus-produced analgesia

2. Psychological Therapies

2.1 Reassurance

2.2 Supportive psychotherapy

2.3 Intensive psychotherapy

2.4 Behaviour therapy

2.5 Cognitive therapy

1. Physical Therapies

1.1 Drug therapy

(i) Tricyclic and monoamine oxidase inhibiting drugs:
There is considerable evidence that antidepressant drugs can improve unexplained physical symptoms. This evidence exists for painful symptoms (Roy et al. 1984; Feinmann, 1983; Lancet, 1984a) as well as for symptoms of the autonomic type of the sort found in panic disorder (Snaith, 1983). For the treatment of unexplained pain, further research of better methodology is awaited (Roy et al. 1984), but results so far have been encouraging. Roy et al. (1984) stated that the mode of action of these drugs in the treatment of pain is not yet clear - proposals include an effect via improvement of depressed mood, an independent analgesic effect, and a placebo effect. There is very preliminary evidence to suggest that antidepressant drugs which have strong serotonin reuptake inhibiting properties such as clomipramine are superior to other antidepressant drugs (Carrasso et al. 1979). This would be in keeping with the proposal that serotonin deficiency can underlie both depression and chronic pain (Ward et al. 1982).

In a recent U.K. study, Feinmann (1983) carried out a double-blind trial of dothiepin and placebo in unexplained facial pain. 48 patients received dothiepin, 45 placebo. Among other measures, a depression score was

obtained using a published depression inventory, and a pain score was obtained using a 0-4 scale. The measures were performed at baseline, and at 3, 6, and 9 weeks after commencement of the drugs. Dothiepin was associated with significantly better pain relief than placebo - at 9 weeks, 73% of the dothiepin group were pain free compared with 44% of the placebo group. This response to dothiepin occurred whether or not psychiatric illness was present at the outset (present in 57%). The amelioration of psychiatric illness and depression scores which occurred over the 9 weeks were no different for the dothiepin and placebo groups. The large improvements in both painful and psychological symptoms in the placebo group was commented upon by the author. In the light of these results, Feinmann concluded that pain relief appeared to have been independent of the antidepressant activity of dothiepin.

(ii) Betablocking drugs: These drugs have been shown to be effective in treating symptoms of the autonomic function type whether or not these symptoms have an explicable cause (Tyrer & Lader, 1974).

1.2 Stimulus-produced analgesia

Acupuncture and transcutaneous nerve stimulation have already been discussed in connection with the investigation of endorphin function (chapter 7). Both methods have been shown to benefit some patients with chronic pain, but most studies have not examined organic

and non-organic pain separately. In a review of acupuncture, Lewith (1984) concluded that this treatment appears to have an analgesic effect in about 60% of patients with chronic pain, compared to 30% receiving placebo, but Lewith also concluded that research of improved methodology is required to discover the precise role of acupuncture in this field.

2. Psychological Therapies

2.1 Reassurance

The reassurance to a patient by a doctor that symptoms are of no serious significance is likely to help the remission of symptoms in a sizeable proportion of patients. Sapira (1972) regards 'reassurance therapy' as a potent form of treatment. Yet, reassurance has not been the subject of much specific investigation, especially where unexplained physical symptoms are concerned. In one study, 33% of patients reassured at a cardiac clinic that there was nothing wrong with their hearts still admitted fears of cardiac disease three months later (Mayou, 1973). Sapiro (1972) stated that good reassurance required six obligatory steps - eliciting a detailed description of the symptoms, discovering the meaning of the symptoms to the patient, a physical examination, the making of a diagnostic statement, an explanation to the patient of the pathophysiological nature of the symptoms, and finally the actual reassurance. Sapiro also stated that the form

of what the doctor says is more important than content - he must appear to understand the symptoms, appear not to be worried by them, be perceived by the patient as being concerned, and not to appear annoyed if symptoms persist or recur. Kessel (1979) pointed out how unhelpful the 'there is nothing wrong' approach can be, and suggested that non-organic symptoms should always be taken seriously by physicians. Warwick & Salkovskis (1985) drew attention to the dangers of indiscriminate reassurance. These authors pointed out that some patients develop recurrent health worries and in such cases regular reassurance could act as a reinforcer and encourage regular consultation. The authors argued that in such cases the underlying disorder, which they suggested is akin to an obsessional one, should be tackled.

2.2 Supportive psychotherapy

A number of authors, in describing their clinical experience in the management of unexplained physical symptoms, have emphasised the need to develop a supportive, empathic relationship with affected patients which may have to be continued for several years but which can be beneficial (Adler, 1981; Monson & Smith, 1983).

2.3 Intensive psychotherapy

Group psychotherapy has been tried for unexplained

physical symptoms with mixed results. Ford & Long (1977) and Roberts (1977) found group therapy difficult to carry out with such patients and limited in efficacy, whereas Pinsky (1978) described a good outcome with group therapy carried out during a 7-week inpatient programme for patients with chronic pain. A finding which attracted much interest was that of Svedlund et al.(1983) who demonstrated the benefit of 10 weekly individual psychotherapy sessions in the irritable bowel syndrome. The psychotherapy focused on stress management and current emotional problems. Physical and psychological symptom scores had improved after 3 months and this improvement was sustained at 15 months. Similar results were obtained by Whorwell et al.(1984) who carried out hypnotherapy in patients with irritable bowel syndrome refractory to other treatments. This result, as the authors admitted, was not in keeping with previous studies, although no previous study had specifically investigated refractory cases.

2.4 Behaviour therapy

The behavioural components of physical symptoms, especially painful ones (Fordyce, 1978), have already been described - verbal complaints, facial grimacing, reductions in regular activities, use of drugs. As with any behaviours, these can be unlearned as well as learned, and this has been the focus of behaviour therapy programmes such as that described by Gotestam (1983). Methods include the reinforcement by staff of non-pain

behaviour only, graded physical exercise, and the prescription of drugs on a regular basis only, not an 'as required' basis, with gradual reduction in dosage. There is much suggestive evidence of the benefits of behaviour therapy but as yet little controlled evaluation.

2.5 Cognitive therapy

This form of therapy has been used with chronic pain and this literature was reviewed by Pearce (1983). Treatment aims at identifying the cognitive processes relevant to the presenting symptoms and helping the individual to develop more adaptive processes. Methods include re-labelling, where the patient is asked to deliberately re-label painful sensations as something less distressing such as 'tingling' or 'warm', and distraction, where the individual is asked to imagine relaxing scenes or to deliberately divert attention onto an external object or by reciting mental arithmetic. Cognitive therapy can include an educational phase in which patients are taught about pain. Pearce concluded that there is as yet insufficient evidence to define the role of cognitive therapy in chronic pain.

Summary of Chapter 9

Further information on the treatment of 'unexplained physical symptoms' must await further treatment trials along with an improved classification of disorders consisting of these symptoms. Certain treatments may prove to be better for different disorders. The adequate and correct use of reassurance has been emphasised by some writers, but if, despite this, symptoms persist, then a supportive and empathic doctor-patient relationship might be necessary before treatments will be successful. A variety of physical and psychological therapies have been applied to chronic unexplained symptoms with perhaps the greatest promise being shown by antidepressant drugs, stimulus-produced analgesia such as acupuncture, and behaviour therapy.

PART II

CLINICAL INVESTIGATION

Chapter 10 INTRODUCTION AND DESCRIPTION OF 11 PATIENTS
WITH 'UNEXPLAINED PHYSICAL SYMPTOMS' SEEN AT
A PSYCHIATRIC OUTPATIENT CLINIC

The main clinical investigation consisted of a survey conducted in two general practices in Southampton. This investigation will be described in chapter 11. In this chapter, some examples of patients with 'unexplained physical symptoms' will be described, patients seen by myself at a psychiatric outpatient clinic. In addition, in an attempt to estimate prevalence in a psychiatric setting, a small investigation will be described in which the case-notes of all new referrals in 1983 to the department of psychiatry in Southampton given ICD-9 diagnoses compatible with disorders consisting of unexplained physical symptoms were examined by myself.

The Series of Psychiatric Outpatients

Between the end of 1982 and the end of 1984 I saw 11 patients, new referrals to my weekly outpatient clinic, who presented with unexplained physical symptoms which had persisted for at least 6 months. This number of referrals cannot be regarded as typical because the majority were directed specially to me because of my known interest in such patients. Between March and June 1985, psychiatric and general medical case-notes of all 11 patients were gathered together, follow-up information was obtained from general practitioners on patients no

longer attending, and detailed case summaries were prepared by myself. Among the information recorded were the clinical variables emphasised in chapters 5 and 6 as being of possible importance to the study and classification of 'unexplained physical symptoms', namely, symptom type, symptom duration, symptom course, nature of onset, symptom severity, presence of illness fear, presence of mental preoccupation with symptoms, presence of illness conviction, and history of frequent non-organic medical consultations. Ideally, this last variable should have been assessed via a personal examination of the patients' general practice files, but this was not done. Based on symptom type, three subgroups seemed to emerge (for definition of symptom 'type', see chapter 1, page 15). Brief case histories will be given for each patient.

Group I: Painful symptoms (n=6)

Group II: Autonomic function type symptoms (n=3)

Group III: Symptoms of mixed type (n=2)

Group I (n=6, 3 female, 3 male) Painful symptoms

Case 1: A 27 year old married male presented a 10 month history of epigastric pain. Course was virtually constant. Onset was subacute and had followed a 7-10 day illness which consisted of general malaise and feverishness. In terms of distress, severity was moderate. In terms of disability, severity was slight. Illness fear was not present. Mental preoccupation with symptoms was moderate. Illness conviction was slight. A history of frequent non-organic consultations was provided by the GP. There was no other previous medical history, and no previous psychiatric history.

The patient lived with his wife. There were no children. He worked as a warehouseman at a supermarket. He denied life problems. The only life event of possible

relevance later elicited was that 6 months prior to symptom onset, the patient had not won promotion at work which he had been expecting. Background information of possible relevance was that he was an only child and his father had deserted the family when he was very young. His mother later remarried but this stepfather died 2 years prior to symptom onset. Personality seemed stable, if rather introverted.

After symptom onset, the GP carried out investigations and treatments but symptoms did not abate. Hospital referral had not taken place.

I discharged the patient after only 2 visits. Information from the GP approximately 2 years later showed that numerous consultations had taken place with a variety of complaints. Epigastric pain had been one of these complaints, and on one occasion, a barium meal had been arranged and had been normal.

Case 2: A 29 year old married female presented a 2.5 year history of lower abdominal pain, associated with diarrhoea, vaginal discharge, and headache. Course had been virtually constant. Onset was subacute and occurred within the few days following a laparoscopic sterilisation. In terms of distress, severity was moderate. In terms of disability, severity was marked, consisting of interference with capacity to work and perform housework, and the development of several depressive symptoms. Illness fear was not present. Mental preoccupation with symptoms was moderate. Illness conviction was moderate. History of frequent non-organic consultations was not elicited. There was no previous medical history of note, and no previous psychiatric history.

The patient lived with her husband and two children, aged 7 and 3. The 7 year old child had Down's syndrome. She had worked as a part-time catering assistant prior to symptom onset. No life problems were reported concerning the period around symptom onset, but during the following year, a serious cardiac condition was diagnosed in her mongol child, her father-in-law and one uncle died, and her mother required a psychiatric admission. Background and premorbid personality seemed stable.

The sterilisation procedure, which had been requested by the patient, had been technically difficult. During the subsequent 9 months, two acute hospital admissions took place because of the abdominal pain and pelvic inflammatory disease was diagnosed on each occasion. Despite treatment, symptoms persisted and hysterectomy was performed 13 months after symptom onset and division of pelvic adhesions was carried out 18 months after onset. After this latter procedure, symptoms resolved but only for 2 months. When they recurred, a gynaecologist stated that he could not explain the abdominal symptoms in organic terms.

The patient did not wish follow-up after her initial visit to me. I advised the use of an antidepressant drug. The patient was referred to another psychiatrist 9 months later but again only attended on one occasion. Information from the GP 2 years after presentation to myself described very frequent consultations with a variety of symptoms but abdominal pain was not emphasised.

Case 3: A 30 year old married male presented a 10 year history of headache and neck pain. Course was said to be constant with prolonged exacerbations, except when relief was obtained with minor analgesic drugs which were taken regularly. Onset had been insidious. In terms of both distress and disability, severity was slight. Psychiatric referral may have taken place because of concern in the patient's wife rather than in the patient. Illness fear was not present. Mental preoccupation with symptoms was not present. Illness conviction was not present. History of frequent non-organic consultations was not elicited. Previous medical history involved recurrent abdominal pain throughout childhood which was said to have progressed to the symptom of headache around the age of 20 years without an interval. There was no previous psychiatric history.

The patient lived with his wife and two children. He worked as a gasfitter. He described no urgent life problems, but said that he found his life dissatisfying and boring, especially his job, and he felt that he had not achieved enough. Background was stable although his father and an elder brother had died 7 years earlier. Personality was not significantly abnormal, but the patient had always been self-critical and had always had difficulty in expressing his emotional problems.

For some reason medical action had only taken place during the 2 years before referral to myself, despite the 10 year history. Treatment from the GP had not helped. Osteopathy, hypnosis, and acupuncture, all received privately, had not helped. The patient had attended a neurology clinic on one occasion 8 months before seeing myself, and a diagnosis of tension headache had been made.

The patient was a sporadic attender at my clinic and did not comply with the treatment offered. 6 months after presentation the patient was seen for the last time - he reported some improvement in the symptoms, that he had changed to a more satisfying job, and that his wife was less anxious about the symptoms. A letter from the GP 15 months after presentation revealed that no consultations had taken place for 1 year.

Case 4: A 44 year old married female presented a 2 year history of headache, neck pain, and giddiness, associated with intermittent pains and paraesthesias elsewhere in the body. Course was constant with

exacerbations on most mornings. Onset was acute consisting of headache and giddiness, but this had not caused alarm at the time. In terms of distress, severity was marked. In terms of disability, severity was also marked - interference in ability to carry out housework, interference in marital relationship, and the development of several depressive symptoms 12-18 months after onset of the physical symptoms. Illness fear was not present. Mental preoccupation with symptoms was marked. Illness conviction was marked. History of frequent non-organic consultations was not elicited. Little past medical history of note was present up until 2 years prior to the onset of the above symptoms, when both cholecystectomy and hysterectomy had taken place. There was no previous psychiatric history.

The patient lived with her husband and one of her seven children. The other children had left home for reasons of marriage etc. during the few years prior to symptom onset. The patient had been a housewife all her life, except for a short spell in factory work which ended in redundancy 6-12 months prior to symptom onset. The patient had moved house a few months prior to symptom onset, a move which she soon regretted because she left behind her place of origin along with some family members and friends. During the 2 years of symptoms prior to presentation, the patient experienced further problems as her youngest daughter developed acute leukaemia, and serious marital problems developed. Background and personality seemed stable, although the patient was of limited education.

After symptom onset, the GP carried out investigations and treatments without benefit. Then, between 6 months and 20 months after symptom onset, the patient attended four different hospital clinics, a medical clinic, a neurology clinic, an E.N.T. clinic, and a rheumatology clinic. Some organic labels were applied, including cervical spondylosis, but evidence for these was limited and treatments were unsuccessful. The patient expressed much dissatisfaction with these clinic visits.

Follow-up and treatment by myself has continued for 2 years. Management has been difficult, partly because of the patient's difficulty in accepting the lack of an organic explanation for symptoms. She insisted on yet another medical clinic referral and this resulted in a C.T. scan of the head which was normal. The treatment which finally produced some improvement but by no means resolved the symptoms, was a combination of supportive psychotherapy and clomipramine. The life problems which had been present initially continued throughout the follow-up period, namely, dissatisfaction with her new home and neighbourhood, marital problems, and her daughter's leukaemia which had been progressive.

Case 5: A 23 year old single male presented a 6 month history of upper abdominal pain, associated with a fluctuating bowel habit and headache. Course was

described as constant with variations in severity. Onset was subacute, following an acute febrile illness, which the patient had found frightening, and the 2-3 weeks of general malaise which followed. In terms of distress, severity was moderate. In terms of disability, severity was marked - the patient had been unable to work and follow his usual leisure activities, and had developed a number of depressive symptoms 2-3 months after physical symptom onset such that a picture of endogenous-type depressive illness was apparent. Illness fear was not present. Mental preoccupation with symptoms and their lack of explanation was moderate. Illness conviction was moderate. There was no history of frequent non-organic consultations, confirmed by his GP. There was no previous medical history of note, and no previous psychiatric history.

The patient lived with his girlfriend who was 16 years his senior. The couple had started living together only 4 months prior to symptom onset. The patient had been in regular employment but had held a variety of unskilled and semiskilled jobs. Both parents were described by the GP as suffering from depression although psychiatric referral had never been made. Personality was not significantly abnormal but he was introverted and stated that he had never been satisfied with life. Other than this, the patient denied life problems and consistently stated that his relationship with his much older girlfriend was a sound one.

After symptom onset, investigations and treatments were carried out by the GP without success. The patient attended a medical clinic 4 months after symptom onset where organic disease was said to be ruled out.

Follow-up and treatment by myself has continued for 1 year. The abdominal pain has not improved at all. The severe depressive symptoms have improved possibly with the help of antidepressant medication. Two further medical/surgical referrals have taken place in an effort to gain better reassurance that organic disease is absent, but these have had no impact on the abdominal symptoms. Disability has continued essentially unchanged, except that the patient succeeded in regularly attending a D.H.S.S. course in bricklaying.

Case 6: A 31 year old divorced female presented an 18 month history of anterior chest pain and thoracic back pain. Course of the chest pain was episodic, episodes generally lasting several hours, while course of the thoracic back pain was constant. Onset was subacute and followed by one week an acute and frightening bout of rapid palpitations, chest pain developing first followed by the back pain. In terms of distress, severity was marked. In terms of disability, severity was moderate - interference with leisure life was reported, and depression of mood developed 6-9 months after symptom onset. Illness fear was strong, involving both heart disease and cancer. Mental preoccupation with symptoms

was marked, which included much time spent on library books trying to find explanations for her symptoms. Illness conviction was slight. History of frequent non-organic consultations was not elicited, although during the 3 years prior to symptom onset, the patient had attended a gynaecology clinic for vaginal discharge and an E.N.T. clinic for 'something in throat', and on each occasion organic disorders had not been found. There was no other previous medical history, and no previous psychiatric history.

The patient lived with her 10 year old daughter. She had been divorced 7 years earlier. She did not work, saying that it was not financially worthwhile. She had close support from family and friends. She denied any life problems, although the father of a man-friend had died of cancer 2 months prior to symptom onset. Background and personality seemed stable. She was described by her mother as mildly prone to worry.

After symptom onset, investigations and treatments were carried out by the GP without success. Some 9 months after symptom onset, the patient attended a medical clinic and was followed-up there for 7 months. Organic disease was excluded. Symptoms other than those mentioned above including numbness and 'something in throat' were presented during this follow-up period and many were attributed to 'hyperventilation' by the physicians.

Treatment and follow-up by myself has continued for 8 months, and during this time the chest pain and thoracic pain have resolved. Important therapeutic measures were thought to be supportive psychotherapy, constant explanations, graded physical exercise, and clomipramine. In addition, the depression of mood and illness fear recovered. Nevertheless, other symptoms emerged transiently during this follow-up period - 'something in throat' and wheeziness, and seemed to be the focus of much worried attention.

Group II (n=3, all female) Symptoms of the autonomic
function type

Case 7: A 30 year old single female presented a 3 year history of giddiness and headache, associated with abdominal discomfort and hand tremor. Course had been episodic. Onset had consisted of an acute and frightening bout of giddiness while at work. Symptoms of apprehension and fear sometimes followed the physical symptoms but never preceded them. Episodes gradually increased in frequency and had been occurring approximately daily during the 1 year prior to presentation. There were no apparent precipitants. In terms of distress, severity was moderate. In terms of

disability, severity was also moderate - considerable interference with work and leisure life had occurred during the 6 months prior to presentation, and depression of mood had developed over the same period associated with sleep disturbance. Illness fear was not present. Mental preoccupation with symptoms was moderate. Illness conviction was slight. History of frequent non-organic consultations was not elicited. However, there had been a prolonged bout of unexplained abdominal pain 7 years before presentation necessitating two acute surgical admissions. There was no previous psychiatric history.

The patient lived with her parents, worked as a manageress in a department store, and lead an active social life. She denied any life problems. However, her job was busy and responsible and had been particularly so over the 3 year period when symptoms had occurred. In addition, she expressed a wish to marry and settle down but said that she had not met the right person. Background and personality seemed very stable.

After symptom onset, symptomatic treatment was given by the GP which the patient said was not beneficial. Hospital referral did not take place for over 2 years, presumably partly because of the low frequency of symptom episodes. 2.5 years after symptom onset the patient attended a neurology clinic on one occasion. Organic disease was not considered to be present, a voluntary overbreathing test was performed and was said to be positive, and no follow-up or treatment was instituted.

Treatment and follow-up continued at my clinic for 1 year and during this time, psychological symptoms resolved but physical symptoms only improved slowly and never fully remitted.

Case 8: A 23 year old married female presented a 6 month history of palpitations and chest pain, associated with paraesthesia of the hands, dizziness, and breathing difficulties. Course had been episodic. Onset had consisted of an acute and frightening bout of palpitations which had wakened the patient from sleep. Symptoms of apprehension and fear had often followed the physical symptoms. Episodes had occurred several times daily during the 6 months, and had had no apparent precipitants. In terms of distress, severity was marked. In terms of disability, severity was moderate, because an endogenous-type depressive illness developed 3-4 months after symptom onset. However, functional impairment was said to be absent. Illness fear was strong and concerned heart disease. Mental preoccupation with symptoms and the lack of available explanations was marked. Illness conviction was moderate. History of frequent non-organic consultations was not elicited. There was no previous medical history of note, and no previous psychiatric history.

The patient lived with her husband and two young children. She worked part-time as an auxiliary nurse.

She denied any life problems. Yet, 6 months after presentation she separated from her husband. The only unstable factor in background was the separation and divorce of her parents when she was aged 15 years. Personality seemed fairly stable but the patient had been unable to complete S.R.N. training, and 9 months after presentation she became pregnant following a casual relationship, and termination took place.

When symptoms had persisted for a few weeks, the patient was referred to a medical clinic but because of a waiting-list, she made a private appointment. She was admitted to hospital for investigations and organic disease was excluded. Investigations continued for 1-2 months at the outpatient clinic. The physicians then referred her to a consultant psychiatrist who saw her 5 months after symptom onset and diagnosed endogenous depressive illness. One month later he arranged for the patient's admission to the acute psychiatric ward on which I was working and I took over clinical care.

I commenced treatment and follow-up but the patient defaulted from clinic attendances approximately 1 month later. During the subsequent 12 months, the patient attended three different physicians, one privately, along with a cheiropractitioner. Furthermore, the prominent symptoms changed from palpitations/chest pain to neck pain.

Case 9: A 33 year old married female presented a 2 year history of palpitations, chest discomfort, and dizziness, associated with paraesthesia in the hands, sweating, and breathing difficulties. Course had been episodic. Onset had consisted of an acute and frightening bout of palpitations and chest discomfort which had wakened the patient from sleep. Symptoms of apprehension and fear often followed the physical symptoms. episodes lasting from minutes to 3 hours, apparently without precipitants, had occurred at least daily during the 2 years. In terms of distress, severity was moderate. In terms of disability, severity was slight. Illness fear was strong and concerned heart disease and cancer. Fear of sudden collapse and even sudden death was present, to the extent that the patient had tried to avoid being alone with her children. Mental preoccupation with symptoms was marked. Illness conviction was moderate. History of frequent non-organic consultations was given by the GP but not quantified. In previous medical history, a 6 year history of arthritis was elicited which had required two arthroscopies, but a precise diagnosis had never been possible. There was no previous psychiatric history.

The patient lived with her husband and three children. She denied life problems and further enquiry did not elicit any. Background and personality seemed stable, although she was described by her husband as a nervous person, prone to worry.

After symptom onset, investigations and treatment were carried out by the GP allegedly without benefit. Hospital referral never took place on account of these symptoms. The only hospital referral which occurred during the 2 years was to a rheumatology clinic because of arthralgia and lethargy. Organic disease was not found.

I discontinued treatment and follow-up 2 months after starting, when the patient informed me that a neurological referral had been made. It emerged much later that this referral had been made for a different set of symptoms, namely, paraesthesia, muscle weakness, and occasional diplopia. No organic disease was found. The patient re-attended my clinic 1 year later, that is 3 years after symptom onset, with the same set of symptoms, except for illness fear which was less marked. Treatment and follow-up was commenced, but the patient defaulted from attending 3 months later.

Group III (n=2, 1 female, 1 male) Mixed symptoms

Case 10: A 36 year old married male presented a 3 year history of multiple symptoms the most prominent being left-sided headache, left-sided facial pain, palpitations, and chest pain, but including upper abdominal discomfort, diarrhoea, and generalised muscular tension. Course was episodic, the episodes generally lasting several hours. Onset was acute and frightening, consisting of headache of a type which the patient had never experienced before and necessitating two weeks off work. In terms of distress, severity was moderate. In terms of disability, severity was slight. Illness fear was moderate and mostly concerned heart disease. Mental preoccupation with symptoms was marked and he searched for explanations such as food allergy. Illness conviction was moderate. History of frequent non-organic consultations was not elicited. Previous medical history involved a confirmed diagnosis of ankylosing spondylosis 6 months prior to symptom onset. This caused intermittent mild backache. There was no previous psychiatric history.

The patient lived with his wife. There were no children at the time of presentation and investigations for infertility had taken place, but one was born 1 year later. He worked as a policeman and expressed some dissatisfaction with his job but said that he could not afford to change it. One year prior to symptom onset, he had been disciplined because he had lost his temper with a superior officer - his duties had been changed. He denied any urgent life problems, and was sure that the problems concerning his work and the ankylosing spondylosis were not mentally affecting him. Background and personality seemed stable.

After symptom onset, investigations and treatments were carried out by the GP without benefit. Treatments included homeopathy and a medical ecology diet. 6 months after symptom onset, the patient attended an E.N.T. clinic where all investigations were normal, except for the detection of mild hypertension. 12 months after symptom onset, the patient attended a psychiatric clinic on one occasion - a diagnosis of anxiety state was made, a benzodiazepine prescribed, and advice on relaxation given - but this did not result in improvement.

The patient was followed-up and treated by myself and a clinical psychologist colleague for 14 months. The principal treatment measure was instructions on relaxation techniques. Symptoms improved but did not resolve. Considerable mental preoccupation with the symptoms continued.

Case 11: A 20 year old single female presented an 11 month history of chest pain, associated with giddiness, headache, paraesthesia in the hands, and breathing difficulties. Course was episodic. Onset, which was of chest pain, was subacute but was recalled as being frightening. Symptoms of apprehension and fear occasionally followed the physical symptoms. For at least 5 months prior to presentation, episodes had been occurring daily, apparently without precipitants, generally lasting for up to 1 hour. In terms of distress, severity was marked. In terms of disability, severity was moderate, consisting of several depressive symptoms, but not of any interference in work and leisure life, etc. Illness fear was strong, and concerned heart disease, and was experienced most acutely when chest pain was present. Mental preoccupation with symptoms was marked. Illness conviction was slight. History of frequent non-organic consultations was not elicited. Previous medical history involved a diagnosis of epilepsy at age 15 years and the subsequent use of anticonvulsant drugs without further seizures. There was no previous psychiatric history.

The patient lived with her parents. She was following a successful career as a secretary. An important relationship with a boyfriend had broken up a few weeks prior to symptom onset. Further boyfriend difficulties were encountered during the several months after presentation. In addition, difficulties with social life and the general direction of her life were expressed, but no difficulties were felt by the patient to be causing actual tension or anxiety. Background and personality was otherwise stable, although both the patient and her mother described a proneness to worry.

After symptom onset, investigations and treatments were carried out by the GP with no benefit. 6 months later the patient attended a medical clinic where organic disease was excluded and she was fully reassured.

Treatment and follow-up by myself continued for 10 months. The depressive symptoms resolved, the episodes of chest pain became very infrequent but did not disappear, the other physical symptoms resolved, and the illness fear resolved.

Summary of the Psychiatric Outpatient Series

Because of the manner in which it was collected, this sample of patients cannot be assumed to be representative of patients in the psychiatric setting with unexplained physical symptoms, but they illustrate the types of case that one might expect to find in the hospital setting, and they also provide an opportunity to dissect the several clinical variables which I have proposed should be examined in research in this field. The sample was one of psychiatric referrals and is therefore likely to be different from patient samples in the hospital medical setting. For example, in the medical setting, the high prevalence of psychiatric illness found in my sample might not be expected. It was my opinion that in all 11 cases, primary psychiatric illness was not the cause of the physical symptoms, but given the complexity of many of the case histories, I cannot regard this view as wholly reliable.

Virtually all symptoms were either of the painful type or the autonomic function type. An approximate subdivision could be made into patients with symptoms predominantly of the painful type (group I) and patients with predominantly autonomic type symptoms (group II), but in 2 cases (group III) this was difficult, and the

differentiation of group I and II was not absolute. Thus, in group II chest pain and headache were to be found, and even abdominal discomfort (case 7). Group I almost all had painful symptoms only, but case 4 also complained of giddiness and paraesthesia. Although the 2 cases in group III had mixed pictures, most of the painful symptoms involved chest pain and headache. These two painful symptoms are recognised effects of autonomic arousal and might be expected to sometimes accompany symptoms of the autonomic function type. Chest pain is listed among several autonomic type symptoms in the DSM-III criteria for panic disorder (see Table 5). Both chest pain and headache were found in the patients in group I. Thus, in terms of symptom type, groups II and III could be viewed together and differentiated from group I, but this subdivision is by no means neat.

Some support for this very approximate subdivision comes from an examination of symptom course. In all 5 cases in groups II and III, course consisted of discrete episodes of symptoms never lasting longer than a few hours. Whereas, in all 6 cases in group I, symptoms were described as constant with perhaps fluctuations in severity. One case (case 6) from group I was difficult to rate because two painful symptoms were presented, one episodic in course, and one constant. In 4 of the 5 cases in groups II and III, apprehension and fear sometimes occurred during an episode, but these always clearly followed the physical symptoms and were usually described by the patients as resulting from the physical

symptoms. In these circumstances, it is difficult to know whether the criteria for panic disorder (Table 5, page 46) are met.

Symptom duration was not particularly prolonged, ranging from 6 months to 3 years, with the exception of case 3 who gave a 10 year history of headache and neck pain, although this patient had only sought medical help over the previous 2 years. Nevertheless, even a symptom duration of 2-3 years might be enough to induce intractability to symptom course.

Examination of mode of onset turned out to be important, because this was acute in every case with the exception once again of case 3. In groups II and III, onset was described as very acute and frightening in 4 of the 5 cases - in 3 patients, this consisted of palpitations, and in 1 patient, giddiness. In group I, I mostly described the onset as subacute, symptoms developing over several days. The alarm which many of these patients said they experienced at the time of onset raises the possibility that the traumatic effects of this onset played a part in subsequent symptom perpetuation. This alarm was apparently seldom defused by the patients' GPs. This sort of reaction might be unusual and could be classified in DSM-III as adjustment disorder (see chapter 4, page 53). Onset in 1 case (case 2) was related to physical trauma (laparoscopic sterilisation, probably followed by pelvic infection). In 2 other cases (cases 1 and 5), onset closely followed an acute febrile illness.

Organic onsets in other cases could not be ruled out, for example, sudden palpitations could have been caused by a paroxysm of supraventricular tachycardia.

Symptom severity, whether regarded as distress or disability, was significant in all cases (as rated by myself), with the exception again of case 3 in whom both distress and disability were rated as slight. Also of possible interest, is that in 4 of the 5 cases in groups II and III, distress was rated more highly than disability - whereas this was done in only 2 of the 6 cases in group I.

Psychiatric illness in the form of depressive illness was found commonly, but in all cases, history appeared to indicate that depressive symptoms had clearly post-dated the physical symptoms, usually by several months. The groups could not be differentiated - depression was present in 4/6 in group I, and 3/5 in groups II and III.

Fear of having a serious illness was a variable finding, present in 5 out of the 11 patients. Illness fear was found more commonly in groups II and III (4/5) than in group I (1/6). This must be interpreted with caution because palpitations and chest pain were more common in groups II and III, and fear of heart disease was the most common illness fear expressed.

Mental preoccupation with the physical symptoms - their existence, their source, their prognosis, their

consequences - was striking in this group, being rated as 'moderate' or 'marked' by myself in all cases except one (case 3 in whom symptom severity was slight). This might be an expected finding for any patient with severe symptoms of 6 months - 3 years duration, but I gained the impression that the degree of mental preoccupation was unusual. If this was so, then the attention mechanism, discussed in chapter 7, may have been involved in symptom production in this group. However, this impression would require confirmation via specific research.

Conviction that serious illness was present despite previous appropriate medical reassurance was a variable finding. I rated this as 'moderate' or 'marked' in 6 of the 11 patients. Similar rates were found in the 3 groups. Clearly this illness conviction was not extreme, because all patients had consented to a psychiatric referral.

History of frequent non-organic medical consultations was elicited in only 2 cases (cases 1 and 9), on each occasion the information being provided by the GP. In many other cases, this history was definitely absent, but in some, further information from the GPs, preferably involving a personal examination of their files, would have been necessary to exclude this history with certainty. The information available on the 2 positive cases raised the possibility that the DSM-III criteria for somatisation disorder would have been met.

It was noteworthy that previous psychiatric history was absent in all cases. Also absent were any gross disturbances in personal backgrounds and personalities. A description of premorbid personality was always recorded by myself, but only 2 characteristics seem worthy of emphasis. Proneness to worry, that is to worried mental preoccupation with single issues, was recorded in 3 cases (cases 6, 9, and 11). This characteristic could, in theory, predispose to the sort of intense mental preoccupation with physical symptoms found in this patient sample. Alexithymia (see chapter 8, page 182) was not formally assessed, but in retrospect I believe that in 4 cases (cases 1, 3, 4, and 5) alexithymia would have been a likely finding. These patients always appeared flat in affect, even when describing distressing situations such as their symptoms, and seldom used emotional terms to describe their feelings. It is interesting to note that all 4 cases are in group I, patients with chronic pain, constant in course.

Significant life events and background stress was evident in several patients but it was difficult to make causal connections. No patient accepted a link between these stresses and their physical symptoms. Life events or background stress had been present prior to or around the time of symptom onset in cases 1, 4, 7, 8, and 11. In most of these cases, stresses continued after symptom onset and could therefore have contributed to symptom perpetuation. In one case (case 2), significant life

events occurred only after symptom onset.

Concerning medical management, every patient was investigated and treated symptomatically by their general practitioner (except case 2 whose symptom onset occurred while in hospital care) yet symptoms persisted. In 9 of the 11 cases, hospital management took place, usually in the outpatient setting, and this principally consisted of excluding organic disease. This hospital management often appeared to myself (and to several patients) as unsatisfactory, but it was not possible to differentiate between inadequate management and disorders which were unmanageable, belonging to patients impossible to reassure.

Difficulties with management were found by myself at the psychiatric clinic. It should be pointed out that at this time I was not very experienced at treating such disorders. On the other hand, because I had developed a special interest in such patients, I devoted a great deal of time and effort to their treatment. Treatment was attempted in 10 patients. Of these, 4 defaulted from clinic attendances. In 3 outcome could be regarded as good (although complete resolution only occurred in case 6), in 2 outcome was fair, and in 1 outcome was poor.

Some information concerning natural history away from the psychiatric setting was available in 4 cases - in case 1 in whom treatment at my clinic was not attempted, and in 3 of the 4 patients who defaulted from attending.

In all 4 patients, information was obtained from their GPs 1-2 years after departing from my clinic. In case 1, there had been frequent GP consultations over the 2 years after leaving my clinic, with varied symptoms, one of which was the original presenting symptom. In case 2, frequent GP consultations had also occurred over a 2 year period, with varied symptoms, and the original presenting symptom was not emphasised by the GP in his letter. In case 8, severe symptoms continued for at least 12 months after the last attendance at my clinic, but the predominant symptoms changed from palpitations and chest pain to neck pain. Case 3 was an atypical member of this sample in many respects - in this case, no GP consultations occurred during a 9 month period after leaving my clinic, suggesting that symptoms had resolved or had become very mild. Thus, a picture of a chronic, unchanging, disabling, unexplained physical disorder does not emerge from this very small sample.

Synopsis

In 11 patients with 'unexplained physical symptoms' of at least 6 months duration seen at a psychiatric clinic, 2 broad groups emerged. In one, symptom course was episodic, and symptom type was mostly autonomic functional although chest pain and headache were found. In the second group, course was constant, and symptoms were nearly always of the painful type. Onset of symptoms was almost always acute, and in many cases this

onset was very acute and frightening, an occurrence which was more common in the group with an episodic symptom course. Regarding symptom severity, there was a trend for distress to be rated higher than disability in the episodic course group, but not in the constant course group. Depressive illness was a common finding but in all cases this illness seemed clearly to post-date the onset of the physical symptoms. An intense mental preoccupation with the physical symptoms - their existence, their source, their prognosis, their consequences - was a particularly striking finding in this group of patients. Stressful life events prior to symptom onset, or the presence of ongoing stresses, were present in 6 of the 11 patients. Management, at least the sort carried out at a psychiatric outpatient clinic, tended to be difficult, and the default rate was quite high. For the purpose of later discussion, I will label the group with the constant symptom course (group I) as 'idiopathic pain disorder', and the episodic course group (groups II and III) as 'atypical panic disorder'.

An Attempt to Assess the Prevalence of Unexplained Physical Symptoms among Psychiatric Referrals Using a Case Register

All patient contacts with the department of psychiatry in Southampton are documented via its Case Register and the information collected includes psychiatric diagnosis which is based on ICD-9. Using the Case Register an attempt was made to estimate the prevalence of chronic

unexplained physical symptoms among referrals to the department of psychiatry during one calendar year. It was feared that the limitations of ICD-9 in classifying unexplained physical symptoms, an issue discussed in chapter 2, would thwart this attempt. Four available ICD categories were considered - hysteria (300.1), hypochondriasis (300.7), psychalgia (307.6), and 'physiological malfunction arising from mental factors' (306) - and the Case Register was asked for the names of all new referrals, aged 16-64, to the department of psychiatry during 1983 who had been given one of these ICD diagnoses. Only 37 patients out of 1,256 new referrals were named. Case-notes of 36 patients were traced and summaries dictated. In 5 cases, this had already been carried out because these patients belonged to my personal outpatient series. These dictated summaries were later studied with two aims in mind - to seek index cases with unexplained physical symptoms of greater than 6 months duration, and secondly, to try and reach a provisional DSM-III diagnosis in each case.

Only 5 possible index cases were detected, in addition to the 5 from my own series, making a total of 10 referrals detected with chronic unexplained physical symptoms out of a total number of referrals for 1983 of 1,256. Of the 5 newly detected cases, 4 had clinical pictures similar to patients in group I in my personal series, patients I tentatively diagnosed as 'idiopathic pain disorder'. One 29 year old female gave a 17 year history of eye pain, although medical attention had only

been sought for 4 years. Numerous physical investigations including a C.T. scan had been normal. Another 29 year old female presented with a 5 year history of headache, unexplained by physical investigations and unresponsive to several physical treatments. A 46 year old male gave a 4 year history of anterior chest pain. Initially, this pain had been regarded as angina, and anti-angina medication prescribed, but approximately 18 months after symptom onset a normal coronary angiogram was performed, and the diagnosis was revised. A 26 year old female presented an 8 year history of multiple joint pains, which had been fully physically investigated and no organic explanation found. The 5th newly detected case had episodic symptoms and presented a similar picture to those which I termed 'atypical panic disorder' in my personal series - this was a 30 year old female with a 4 year history of headaches and paraesthesias, mostly left-sided, following an episodic course. No organic explanations had been found at neurology and E.N.T. clinics.

15 of the 36 cases detected by the Case Register were of no further interest (dissociation disorder, presence of chronic organic disease, misclassifications)(Table 16). A further 11 cases did not appear to meet my criteria for chronic unexplained physical symptoms but were nevertheless of possible interest. 2 female patients had longstanding histories of multiple symptoms, such that somatisation disorder was possible, but available information was insufficient on which to base this.

Table 16. Provisional DSM-III Diagnoses in the 36 Cases
Detected by the Case Register

	No. of cases
'Idiopathic pain disorder'	6(2 from personal series)
'Atypical panic disorder'	4(3 from personal series)
Possible Somatisation disorder	2
Conversion disorder	4
Drug dependence	1
Tension headache	1
Probable Panic disorder	3
Dissociation disorder	4
Adjustment disorder, associated with chronic organic disease	9
Misclassified	2
	—
	36

this diagnosis. 4 cases of probable conversion disorder were detected. These patients had symptoms involving disturbances of motor function (dysphonia in 3, paraplegia in 1) which were thought to be psychologically caused. One man gave a 4 year history of unexplained back pain, and while 'idiopathic pain disorder' could not be excluded, it seemed likely to the psychiatrist involved that this symptom related to dependence on dihydrocodeine. One patient had classical tension

headache and had been referred for hypnotherapy and not for evaluation. 3 patients presented with episodic physical symptoms typical of those listed in DSM-III as found in panic disorder or generalised anxiety disorder. Mental symptoms of anxiety were present but not prominent and this is probably the reason why the psychiatrists involved gave a diagnosis from one of the above ICD categories. At the practical level, anxiety was diagnosed as the cause of symptoms in all cases, diagnoses readily accepted by the patients.

In conclusion, an examination of new psychiatric referrals via a Case Register revealed a very small number with chronic unexplained physical symptoms (10 out of 1,256). This can be interpreted in one of three ways. (i) Such chronic disorders are in fact rare. (ii) Such chronic disorders are seldom referred to our department of psychiatry, but are found more commonly in other medical settings. (iii) The limitations of ICD-9 results frequently in misclassification - for example, some cases could be incorrectly being diagnosed as depressive illness or anxiety state. This last interpretation is supported by the fact that as many index cases were seen at my clinic as were seen by the entire remainder of the psychiatric department - an unlikely occurrence.

Chapter 11 AN INVESTIGATION INTO THE PREVALENCE AND
CLINICAL FEATURES OF DISORDERS CONSISTING OF
CHRONIC 'UNEXPLAINED PHYSICAL SYMPTOMS' IN A
GENERAL PRACTICE POPULATION

Introduction

Epidemiological research can be usefully carried out using U.K. general practices because almost the entire population is registered and the bulk of self-referred medical care is undertaken in general practice (Goldberg & Huxley, 1980). General practice patient lists can be regarded as approximate representative samples of the local general population. The principal aim of my investigation was therefore to detect and describe all cases with chronic 'unexplained physical symptoms' in a patient sample representative of general practice patient lists, in the hope that this sample would be approximately representative of the general population. It was at least expected that the sample would be more useful for seeking epidemiological information than the hospital-based samples used in previous studies in this field, a point discussed in chapters 5 and 6. A secondary aim was to attempt to improve on diagnostic reliability as far as the exclusion of organic and psychiatric causes of symptoms are concerned, issues discussed in chapters 3 and 4. This attempt involved using a 'panel' of doctors, but it was of limited success.

For this part of the investigation, only symptoms of at least 6 months in duration were considered. The intention was to concentrate upon the more severe cases, cases similar to those seen in the hospital setting. By basing the investigation in general practice, it was also hoped that cases might be detected in the early stages of their course. In addition, data were acquired on the consultation patterns of the entire patient sample, and some of this will be presented.

Method

1. The Practices

Practice 1 consisted of 4 full-time partners and one part-time partner, it had a patient list of approximately 9,000, and was located in Southampton's inner city area. Two of the partners had interests in medical osteopathy, and another an interest in the use of acupuncture. This practice also had the services of a part-time non-medical counsellor. Practice 2 also consisted of 4 full-time partners and one part-time, and 2 trainee general practitioners were in post at the time of the survey. This practice had a patient list of approximately 10,000, and was located between the inner city area and the residential suburbs.

2. The Patient Samples

Each practice had an age-sex register. This contained an index card for each patient and these were segregated by sex and year of birth. Only patients in the age range 20-59 years were considered. The number of cards in each year of birth block for each sex was counted. The total number of cards in practice 1 was 4,811, and the total in practice 2 was 5,053. By picking out every 1/5th card down the alphabet, a sample of 1,000 patients for each practice was selected which represented the age and sex distributions of the age-sex register. Name, address, and year of birth were recorded from the index card of each of these 1,000 patients. With the help of the practice receptionists, the medical files for these 2,000 patients were sought and when found, a red adhesive star was placed on the top right-hand corner of the outer cover. In fact, several medical files could not be located despite several searches, and it was assumed by the receptionists that these were files of patients who had left the practice but for whom the age-sex register had not been updated. 13% of files in practice 1 and 14% of files in practice 2 could not be located. When this happened the next card down the alphabet was selected and that patient joined the sample. A small number of files of these replacement patients were also missing, and the process was repeated until the sample of 2,000 was completed.

The next task, one carried out during and after the survey, was to try and establish how many of the study sample were truly registered with one of the two practices and were therefore 'at risk'. Patients were deemed to be 'at risk' if any of the following occurred:

1. at least one consultation took place during the 6 month survey period.

2. contact was made with the surgery via attendance with a practice nurse, request for a repeat prescription, failure to keep an appointment which had been requested, receipt of hospital correspondence concerning the patient, passport application, or request for a medical report from an insurance company, etc.

3. their name was detected on the Family Practitioner Committee (F.P.C.) list (in the case of practice 1), or on the age-sex register (in the case of practice 2), at the end of the survey. The F.P.C. was not used for practice 2 because (a) their age-sex register was being faithfully maintained by the time of the survey, and (b) a great deal of time had been spent at the F.P.C. for the practice 1 sample for the sake of excluding only a very few patients not 'at risk'.

Patients were deemed to be not 'at risk', and were therefore removed from the final study sample, if any of the following occurred:

1. departure from the practice during the survey period was known to have taken place, usually because a medical file was recalled by the F.P.C.

2. no consultation or other contact had taken place for at least 10 years. This is known to be very rare in registered patients in U.K. general practice (Kessel & Shepherd, 1965). The majority of patients excluded in this way had not consulted for over 20 years and it was clear that they had left the area but their medical file had never been recalled. These patients were detected during an inspection by myself of files of all the survey non-consulters in practice 1, and of a 20% sample of non-consulter files in practice 2.

3. their names were not detected on the F.P.C. list (in the case of practice 1), or on the age-sex register (in the case of practice 2), at the end of the survey.

This process reduced the final study samples to 841 in practice 1, and 895 in practice 2, a total of 1,736 patients. The age and sex distributions of these two samples are shown in Table 17, and compared with data gathered from the 1981 10% Census for the wards in which the practices are located. This comparison is only rough because not all the practice patients resided in the local ward. The sex distribution of the study samples correspond fairly closely to that of the local populations. Age distribution also corresponds approximately with the exception of males aged 20-29 in practice 1 who appear to be under-represented when compared with the local population.

Table 17. Age and Sex Distributions of the Patient
Samples Compared with the Local Populations
Using the 1981 10% Census

	Practice 1 (n=841)	Bargate, Southampton (n=5,573)
Male	55%	53%
Female	45%	47%

	Practice 2 (n=895)	Portswood, Southampton (n=6,249)
Male	51%	52%
Female	49%	48%

MALES

	Practice 1 (n=460)	Bargate (n=2,953)	Practice 2 (n=454)	Portswood (n=3,249)
Age				
20-29	28%	36%	33%	34%
30-39	24%	20%	27%	24%
40-49	23%	21%	21%	20%
50-59	26%	23%	19%	22%

FEMALE

	Practice 1 (n=381)	Bargate (n=2,620)	Practice 2 (n=441)	Portswood (n=3,000)
Age				
20-29	34%	35%	33%	29%
30-39	24%	19%	25%	26%
40-49	18%	21%	20%	21%
50-59	23%	25%	21%	23%

Criticisms of the Patient Sample

The samples cannot be assumed to be truly representative of all patients registered with the two practices for the following reasons:

1. the age-sex registers, on which the samples were based, were unfortunately not up to date. For 13%-14% of the original sample, medical files could not be located and it was assumed that these patients were no longer registered. In a proportion of those who started the survey in the sample (approximately 7%), later inspection of the files revealed that they had not consulted for many years and were therefore highly unlikely to be still registered.

2. the mobile population was not included. Newly arrived patients registering during the survey period were not included, and patients in the samples who left the practices during the survey period were excluded, whether or not they had consulted. It has been acknowledged in previous general practice surveys that this mobile population, contained within the 10% per annum turnover which the average general practice experiences, is particularly difficult to investigate (Goldberg & Huxley, 1980).

3. even Family Practitioner Committee (F.P.C.) lists have been shown to be not entirely accurate. Sheldon et al.(1984) demonstrated an inflation rate of around 3% when 10 group practices were averaged. In other words,

3% of those on the F.P.C. lists were in fact not registered at the stated practice. Thus, around 3% of the practice 1 non-consulters whose names were found at the F.P.C. would be expected not to be at risk but were included in the final sample. Furthermore, the F.P.C. records were not used for practice 2 non-consulters - a 20% sample was checked against the age-sex register and the number of missing names was multiplied by 5.

4. patients who consulted or made contact early in the survey period, then left the practice before the end of the survey, but for whom medical files were not recalled until after the survey, were regarded as being 'at risk' throughout the survey period.

5. it is possible that a very small number of patients excluded because they had not consulted for at least 10 years were in fact still registered and 'at risk'.

To summarise, points 1 and 2 show that the final patient samples were not exactly representative of all currently registered patients, and points 3 and 4 suggest that the size of the final samples may have been slightly inflated, and point 5 describes a possible very small deflation in sample size.

In defence of the samples, it should be emphasised that patients were selected by alphabet only - no other information was available for use in the selection process. Secondly, the final samples do not show gross discrepancies in terms of age and sex distribution with the local populations (Table 17). It is clearly not easy

to obtain totally accurate patient samples in general practice, but my belief is that my final samples were approximately representative of the local general populations, and were certainly superior to the patient samples used by previous hospital-based studies in this field.

3. The Survey

Details of all consultations made by the survey patients were recorded throughout the 6 month survey periods. The survey for practice 1 was conducted between May-November, 1984, and that for practice 2 between October 1984-April, 1985. In addition, background medical information was recorded for all consultants. A consultation was defined as a face to face meeting with a doctor, at the surgery, at home, or with the emergency deputising service. Therefore, repeat prescriptions, sickness certificates issued without a meeting, telephone consultations, and consultations with practice nurses were not included. The definition of a consultation has varied between general practice surveys (Goldberg & Huxley, 1980), which unfortunately means that consultation rates can be difficult to compare.

Data concerning each consultation was collected by myself from the handwritten notes of the GPs after the consultation had taken place. In most previous surveys, data has been collected by the GPs themselves at the time of the consultation. My approach, which could have

introduced inaccuracy into the data, was undertaken for the sake of feasibility after discussions with the partners. However, by the end of the survey, I was satisfied that this method had not led to problems. This is because I was primarily trying to locate patients with chronic symptoms, that is, at least 6 months in duration. It transpired that it was quite easy to detect such patients because several consultations had usually taken place within this time, and hospital referral had often been made with the result that hospital correspondence could be used as a source of information. The method had the advantage that all assessments were carried out by one person (myself), avoiding the inter-doctor variation that could otherwise have arisen. The method also meant that a consultation could only be detected if notes were written, but I was led to believe that this virtually always occurred.

Throughout each day of the survey, the practice receptionists set aside any 'red star' files that were in circulation for my inspection before these were refiled. I visited the practices on every weekday throughout the survey periods to inspect these files, except for one week when a colleague substituted, and except for isolated days when the files were held over to the following day. Information about consultations, along with background medical information, was dictated by myself, and typed by a research secretary onto paper identified only by a code number. The receptionists' role in setting aside files was found to be reliable.

All files of non-consulting patients in practice 1, and a 20% sample of those in practice 2 were inspected by myself at the end of the survey, and only 2% and 6% respectively were found to be files of consultants missed by the receptionists. This error was therefore corrected for, but an uncorrected error concerned the application of the above missed detection rates to the periods between the last consultation and the end of the survey in the case of consultants.

In addition to recording the clinical information already referred to, lists of patients (via their code numbers) were compiled during the practice visits.

1. those in whom chronic 'unexplained physical symptoms' were a possibility.

2. those in whom follow-up was desired because 'unexplained' symptoms were apparent but duration was less than 6 months - this list was named 'Follow-up'.

3. those in whom consultation rates had been very high for at least 5 years and presenting complaints had varied - this list was named 'Fluctuators'.

4. those who had symptoms of greater than 6 months duration but in whom these symptoms related to an organic disease unequivocally diagnosed, usually at a hospital clinic, for example, rheumatoid arthritis - this list was named 'Chronic Organic'. Lists 3 and 4 were only compiled for practice 1.

Patients With Chronic Unexplained Physical Symptoms

When I suspected the possible presence of 'unexplained physical symptoms' of at least 6 months duration, I contacted that patient's GP. The GP was asked to complete a 'Diagnostic Classification', using the form shown in Figure 1. This classification subdivided physical symptoms into those of organic explanation, those of psychiatric explanation, and those without an explanation. Working definitions for each category were provided, and the GPs, in making their judgements, were asked to place themselves in the shoes of the 'majority of doctors in the U.K.', in an attempt to encourage them to objectify their judgements. The GPs were also asked to sign, in their own names, a standardised letter inviting the patients to arrange an appointment at the surgery with myself. In the event, only 16 possible cases in practice 1 and 5 in practice 2 were detected. At my interview, I simply collected clinical information concerning the symptoms to an extent that I could describe the patients along the same lines as those described in chapter 10, and make a 'diagnostic classification'. I was also helped by making detailed reference to the patients' medical files. A formal psychiatric evaluation was not performed.

It was stated earlier that it was planned to seek diagnostic reliability by using a 'panel' of doctors.

Figure 1. Form for Diagnostic Classification Used by
the Medical 'Panel'

Diagnostic Classification Patient No.....

Please complete only one of the three categories

CATEGORY 1 The physical symptoms can be explained by:

_____ 1.(a)definite organic illness: an illness which would be termed organic in a conventional textbook of medicine. Objective evidence of pathology e.g. structural, physiological, biochemical, should preferably be present. The vast majority of doctors in the U.K. would be expected to agree on this classification.

_____ 1.(b)probable organic illness: as above, except for 'vast majority' read 'majority'.

Functional component:

_____ definite	this refers to any discrepancy
_____ probable	between excessive symptoms and the
_____ possible	organic cause i.e. the functional
_____ absent	overlay.

CATEGORY 2 The physical symptoms can be explained by:

_____ 2.(a)definite psychiatric illness: common examples would be depressive illness and anxiety state with autonomic arousal. Other examples might include definite hyperventilation syndrome and obvious psychosocial stress. The physical effects of alcoholism and drug dependence should be included here. The vast majority of doctors in the U.K. would be expected to agree on this classification.

_____ 2.(b)probable psychiatric illness: as above, except for 'vast majority' read 'majority'.

CATEGORY 3 The physical symptoms can be explained by:

_____ 3. neither organic nor psychiatric illness: cases who do not fit into categories 1 or 2. In some cases the doctor may feel personally sure that the explanation is organic or psychiatric, but unless he/she feels that this opinion is likely to be shared by the majority of doctors in the U.K., then the case should be classified in category 3.

This panel was to include the patient's GP, myself, and a local consultant physician, each of whom was to complete the 'diagnostic classification' shown in Figure 1. The physician, for the sake of feasibility, and comfort of the patients, was to make his judgement on the basis of case summaries prepared by the GP and myself. However, after 4 cases, this approach was abandoned - the physician found it impossible to pass judgement on summaries alone on what were always complex cases. Thus, the final 'panel' consisted of only the GP and myself.

The files of patients placed on the 'Follow-up' list were examined at intervals over the months following the end of the survey. This follow-up lasted for 8 months with practice 1, and 5 months with practice 2. 55 patients from practice 1 and 33 from practice 2 were monitored in this way, and for any who qualified as having possible chronic unexplained physical symptoms the procedure described above was followed.

It has already been mentioned that at the end of the surveys, files of all non-consulting patients from practice 1 and files of a 20% sample of non-consulters from practice 2 were inspected by myself. This detected a small number of consulters whose files the receptionists had failed to set aside, a number of patients who had been in contact with the surgery and were therefore deemed 'at risk', and patients who had not consulted or been in contact for at least 10 years and who were excluded from the sample. Furthermore, for all

the non-consulters in practice 1, brief medical summaries were dictated, and it is noteworthy that no suspected cases with chronic unexplained physical symptoms were detected in this group.

Ethical Committee

This investigation received ethical approval from the Joint Ethical Sub-Committee of the Southampton and South-West Hampshire District Health Authority and the Faculty of Medicine of Southampton University.

Results

Tables 18 and 19 show the consultation rates for the two patient samples over the 6 month survey periods. It should be noted that consultations concerned with pregnancy, requests for pregnancy tests, infertility, family planning, requests for sterilisation, and routine cervical smears, have all been excluded.

A large proportion of patients consulted their GP at least once during the 6 months. This proportion ranged from 65% of females in the practice 1 sample to 39% of males in the practice 2 sample. Female preponderance in these consultation data is striking, despite the exclusion of the female-orientated consultations listed above. This has been a consistent finding in general practice surveys (Goldberg & Huxley, 1980), as well as in other studies of health care use (Nathanson, 1977). In

Table 18 Consultation Rates for Practice 1

Females

Age	At Risk	Consulters	Consultations	Rate 1	Rate 2
20-29	130	84(65%)	271	2.1	3.2
30-39	92	60(65%)	193	2.1	3.2
40-49	70	43(61%)	134	1.9	3.1
50-59	89	62(70%)	199	2.2	3.2
Total	381	249(65%)	797	2.1	3.2

Males

20-29	127	63(50%)	136	1.1	2.2
30-39	110	50(46%)	113	1.0	2.3
40-49	104	47(45%)	95	0.9	2.0
50-59	119	58(49%)	158	1.3	2.7
Total	460	218(47%)	502	1.1	2.3

Rate 1 = Consultations per At Risk Subject

Rate 2 = Consultations per Consulter

Table 19 Consultation Rates for Practice 2

Female

Age	At Risk	Consulters	Consultations	Rate 1	Rate 2
20-29	146	71(49%)	157	1.1	2.2
30-39	112	54(48%)	108	1.0	2.0
40-49	89	54(61%)	109	1.2	2.0
50-59	94	50(53%)	113	1.2	2.3
Total	441	229(52%)	487	1.1	2.1

Males

20-29	150	53(35%)	103	0.7	1.9
30-39	121	36(30%)	73	0.6	2.0
40-49	97	39(40%)	68	0.7	1.7
50-59	86	49(57%)	102	1.2	2.1
Total	454	177(39%)	346	0.8	2.0

Rate 1 = Consultations per At Risk Subject

Rate 2 = Consultations per Consuler

practice 2, this preponderance was due simply to a higher proportion of females consulting, while in practice 1, the number of consultations per consulter for females was also greater. Variation in consultation rates between the practices can be observed. I have no explanation for this, except to note that a much higher proportion of those living in the ward adjacent to practice 1 were of social classes 4 or 5 (41% v 20%)(1981 Census). It demonstrates the value of incorporating at least two practices in a general practice survey, to try and counter the effects of inter-practice variation. Age did not significantly influence consultation rates in practice 1, while in practice 2, there was a tendency for the higher age groups to have higher rates, especially the men.

Patients with Chronic Unexplained Physical Symptoms

Out of 873 consulters, from both practices, only 20 cases with possible unexplained physical symptoms of at least 6 months duration were located during the surveys. The vast majority of consulters presented with apparently transient symptoms. It should be noted that symptoms were deemed 'transient' if no subsequent consultations took place for these symptoms for at least several months, or if at the next consultation no reference was made to them in the GP's written notes. It is possible that some chronic unexplained physical symptoms were missed because patients withheld these complaints from the GPs, sought treatment elsewhere, or experienced symptoms

of such mild severity that advice from the GP was not thought necessary. The seeking of medical treatment independently of GPs is still uncommon in the U.K. Chronic symptoms of very mild severity were possibly missed but these cases would not have been relevant to my study which was most interested in cases of the sort of severity seen at hospital.

The names of 88 patients had been placed on the 'follow-up' list during the survey because unexplained physical symptoms had been suspected but duration was less than 6 months. The medical files of these patients were monitored for between 5-8 months after the end of the survey, and remarkably only one further index case was discovered. The remaining 'follow-up' patients fell into two broad groups. In approximately 2/3, symptoms appeared to resolve because consultations for these symptoms ceased, and GPs took no further action, such as hospital referral. In approximately 1/3, fairly definite organic explanations for symptoms were diagnosed, almost always at hospital clinics. In the majority of the latter, symptom resolution also appeared to take place. In several of these patients with organic symptoms, the complaints seemed to be out of proportion to the organic findings. This possible non-organic elaboration of organic physical symptoms may therefore have been more common than totally unexplained physical symptoms.

A total of 21 possible index cases were therefore detected. 17 patients attended for a research interview

Table 20 Nature of Symptoms in the 8 Index Cases
 Detected by the Survey, and in 13 Excluded
 Cases

Index Cases

- n = 4 Chronic unexplained pain (cases 12-15)
- n = 2 Chronic unexplained pain on the background of a
 'fluctuator' consultation pattern (cases 16-17)
- n = 1 Episodic unexplained pain (case 18)
- n = 1 Episodic unexplained pain on the background of a
 'fluctuator' consultation pattern (case 19)

Excluded Cases

- n = 6 Organic explanations for symptoms, as judged by
 both the GP and myself, with the aid of any
 hospital correspondence (includes case 20)
- n = 1 Psychiatric explanation for symptoms, as judged
 by myself (case 21)
- n = 3 Symptom resolution, despite a symptom duration of
 greater than 6 months. In one case (case 22),
 resolution closely followed the receipt of firm
 reassurance from a hospital specialist
- n = 2 Symptoms found at interview to be of less than 6
 months duration and to have resolved
- n = 1 Symptoms of very mild severity (case 23)
-

with myself, 5 of whom attended on two occasions. 3 patients declined, and one had left the area by the time the request for this interview was sent. For these 4 cases, information from medical files was relied upon. Only 8 of these patients were confirmed as index cases, that is, patients with 'unexplained' physical symptoms of at least 6 months duration. The nature of symptoms in these 8 index cases, along with the 13 excluded cases, is outlined in Table 20.

Case histories for the 8 index cases will now be provided. The histories of 4 of the 'excluded' cases will also be given, in order to illustrate some of the difficulties in determining the presence or absence of 'chronic unexplained physical symptoms'.

Case 12: A 47 year old married female presented a 5 year history of thoracic back pain which had been constant in course with fluctuations in severity. She also described recurrent episodes of unexplained neck stiffness although, by the end of the follow-up period, this had not recurred for 1 year. Onset could not be recalled and was probably insidious. In terms of distress, severity was moderate, and in terms of disability, severity was also moderate - the patient said that the back pain had resulted in her restricting her job to part-time, had interfered with her leisure life and sexual life, and resulted in intermittent depression of mood. Illness fear was not present. Mental preoccupation with symptoms was slight. Illness conviction was not present. A past history of frequent non-organic consultations was not present. No other previous medical history of note and no previous psychiatric history was present.

The patient lived with her husband and one of her 3 children. She worked part-time as a secretary. No urgent life problems were described but her husband was said to have caused her worry and tension over the years. Her husband and one of her children presented intermittently to the family GP with unexplained symptoms. Background was stable. Personality was not

abnormal, but the patient described a longstanding inability to relax, and a proneness to mild depression.

After symptom onset, all investigations and treatments had been carried out by the GP and hospital referral had not been made. Treatment had included osteopathy and acupuncture without benefit. Plans had been made to refer the patient to the practice counsellor, but this had never materialised.

Case 13: A 33 year old single male presented a 10 year (approximately) history of frontal headache. Course was constant, with exacerbations which typically lasted 12-24 hours. Onset had been insidious. In terms of distress, severity was moderate. In terms of disability, severity was moderate - there was intermittent interference with capacity to work, and the patient suspected that headache caused depression of mood and indecisiveness. Illness fear was not present. Mental preoccupation with symptoms was moderate. Illness conviction was slight - the patient preferred to consider a physical cause as most likely. History of frequent non-organic consultations was not present. Past medical history consisted of mild psoriasis. The GP medical file contained few references to headache until 1983, 2 years before this survey. Past psychiatric history consisted of a single consultation at age 20 when a diagnosis of LSD toxicity was made - the psychiatrist described personality problems, calling him an 'isolated' individual.

The patient was single and had run a health food shop for the previous 10 years. He admitted to longstanding life problems. His mother had suffered recurrent, severe mental illness, said to be schizophrenia. His parents had separated and his father now lived abroad. He described dissatisfaction with life and himself which had lasted all his adult life. He described himself as 'introspective' and a person who had difficulties in socialising. 'Alexithymia' seemed clearly absent. The patient did, however, describe a tendency to bottle-up anger, anger which often he could not explain.

The patient tried self-treatments first, herbal remedies and dietary measures. In 1983 he was referred to a Neurology clinic where organic explanations were confidently excluded. The neurologist recommended antidepressant treatment, and the patient received amitriptyline 75 mg daily for several weeks without benefit. He was then referred to a psychotherapist and accepted for therapy, but he declined the offer. At the time of my research interview, the patient was awaiting an ENT appointment on account of the headache.

Case 14: This case was a 55 year old man who presented a 12-18 month history of unexplained chest pain. This had followed a coronary artery bypass operation for angina. This was the case picked up during

the monitoring of patients on the 'follow-up' list. Unfortunately, he had left the practice by the time he was asked to attend for a research interview. Available information is therefore limited. Course was constant. Onset closely followed the cardiac operation and was probably subacute or insidious. Severity was not rated but available evidence points to a moderate severity. History of frequent non-organic consultations prior to symptom onset was not present. No other previous medical history of note and no previous psychiatric history was present.

After symptom onset, the patient was seen at a cardiology clinic. Organic explanations were doubted but repeat coronary angiography was discussed, although never performed. In late 1984 an emergency medical admission took place because of chest pain, but no diagnosis was reached.

Case 15: A 28 year old female presented a 12 year history of widespread joint and muscle pains. This patient did not attend for a research interview, so information is limited. Course was described at a hospital clinic as constant. Information about onset, severity, illness fear, mental preoccupation, and illness conviction, was not available. History of frequent non-organic consultations was partially present, but the patient did not qualify as a 'fluctuator'. No other previous medical history of note. The GP file contains several references to painful musculoskeletal complaints from 1977 onwards. There was no psychiatric history.

The patient was divorced and lived with her one child. She did not work.

Symptomatic treatments were provided for several years, until in 1985 the patient was referred to a Rheumatology clinic. Physical examinations and subsequent investigations were normal, and an organic disorder was considered 'very doubtful'. At the first visit, the patient was described as 'somewhat over-reactive and hypochondriacal', but no other reference to mental state was made. On her second visit, she was described as 'well and cheerful'. At the time of the request for the research interview, further investigations and follow-up at this clinic had been arranged.

Case 16: A 55 year old married female presented a 2 year history of upper abdominal pain. This pain had varied slightly in site and character. Course had been constant with exacerbations, although a remission of 2-3 months is included. Onset had been insidious. In terms of distress, severity was moderate, but in terms of disability, severity was surprisingly slight. Illness fear was not present. Mental preoccupation with symptoms was moderate. Illness conviction was moderate. There was a striking history of frequent non-organic

consultations recorded in the medical file - this had started in 1961 when the patient was 32. The majority of symptoms had been of the painful type. Consultation rate had not been excessive until 1970 since when it had been very high, averaging 8.5 per year. There seemed little doubt that DSM-III diagnostic criteria for somatisation disorder would have been met, except for the criterion which stipulates onset before the age of 30. The patient herself recounted how she had experienced a variety of painful symptoms for years, and could not remember when she was last well. The only past medical history of an organic disorder was that of renal calculus, first noted on x-ray in 1975 when renal colic occurred. There was no previous psychiatric history.

The patient lived with her husband. She had been a housewife since her marriage approximately 30 years earlier. She led a fairly active leisure and family life. She denied significant life problems. Background and personality seemed unremarkable.

After symptom onset, the patient was referred to a Gastroenterology clinic. The patient had previously attended this clinic for abdominal pain in 1979 when all investigations had been normal. On this latest occasion, organic disorder was not thought to be present, although at subsequent follow-up a diagnosis of "some form of irritable bowel syndrome" was suggested.

Case 17: A 38 year old widowed female presented a 12 year history (approximately) of abdominal pain, usually left iliac fossa in site. Course was described as constant. Other intermittent abdominal pains, of various sites, had also occurred. Onset had been insidious, and the patient attributed this onset to an ovarian cyst which was removed surgically 2 years later. The patient also presented longstanding back pain, intermittent urinary frequency and urgency, 'migraine', grittiness of the eyes, and intermittent unpleasant sensations on her body. The severity of the abdominal pain, in terms of distress, was described as slight, but in terms of disability, was described as marked - the patient claimed that the symptoms prevented her from working, interfered with her capacity to carry out her housework, and with her leisure life. She denied that depression of mood had resulted. Illness fear was not present. Mental preoccupation with symptoms was slight. Illness conviction was not present - the patient said she would not reject a psychological explanation. History of frequent non-organic consultations was present, and the patient qualified as a 'fluctuator' - 48 consultations had taken place between 1980-1984, and many were for physical symptoms which did not have recorded explanations. Past medical history had involved attendance at 7 different hospital clinics since 1970. Hysterectomy had taken place, and laminectomy in 1979 for back pain. Past psychiatric history involved 2 overdoses, in 1968 and 1973. A psychiatrist in 1973 had referred to 'sociopathy', although there was no question

of criminal behavior.

The patient lived alone. She had not worked for 8 years. She was dissatisfied with her council home because it had stairs. Her lifestyle was restrictive. She described several life problems which had started in the early 1970s. Her first marriage broke down then and led to divorce in 1978. She lost her job as a manageress through redundancy in 1977. Her second marriage was also unsuccessful, ending in the suicide of her husband in 1982.

The patient had first attended a Gynaecology clinic for the abdominal symptoms, and this had culminated in a hysterectomy. In 1979 she was referred to a Surgical clinic and had attended regularly ever since, even although an organic condition had never been found. 'Irritable bowel syndrome' was eventually diagnosed in 1981. Site of abdominal pain had often varied during attendances at this clinic, and several other symptoms had often also been presented. In 1985 the patient presented the symptom of rectal bleeding, in addition to abdominal pain, and she was placed on the waiting list for colonoscopy. She was still waiting for this procedure at the time of my research interview.

Case 18: A 56 year old married male gave a 5 year history of upper abdominal and retrosternal pain. Two sets of symptoms were present. Episodes of burning lower sternal pain occurred several times daily, sometimes were related to eating, and often were relieved by antacids. Secondly, episodes of upper abdominal pain, associated with vomiting and feeling feverish, had been occurring every 2-3 months, generally lasting up to several days. Onset had been insidious. In terms of distress, severity was slight. But in terms of disability, severity was marked because the patient had been unable to work since symptom onset and for 3 years had been receiving Invalidity Benefit. Interference with other activities was said not to have occurred, and psychological sequelae were said to be slight. Illness fear was not present. Mental preoccupation with the symptoms, by the time of the survey, was slight. Illness conviction was not present. History of frequent non-organic consultations was not contained in the GP medical file. The only past medical history of note was lymphocytic meningitis in 1958. There was a past psychiatric history - outpatient treatment in 1965 for 'reactive depression'.

The patient lived with his wife. He had been an HGV lorry driver all his life until resigning due to the present symptoms. Life stresses, either at the time of symptom onset or later, were denied. Background and personality seemed unremarkable. Moderately heavy alcohol consumption up to approximately 1977 since when this had been almost nil.

After symptom onset in 1979, a clinical diagnosis of

duodenal ulcer was made by the GP and the appropriate medication prescribed. Later that year an emergency surgical admission took place because of upper abdominal pain and was followed by outpatient follow-up, but investigations were negative and no diagnosis could be reached. In 1980 a barium meal was ordered by the GP and demonstrated a small hiatus hernia with oesophageal reflux. In 1981 a second emergency surgical admission took place but once again investigations were normal and no diagnosis was reached. In 1982 the patient was referred to a Gastroenterology clinic where he was followed-up for 1 year. A whole range of investigations were performed. These were almost all normal, but some equivocal findings were made, such as a 'mildly distorted pylorus' on gastroscopy. The patient was discharged without a diagnosis. Antacid medication had been prescribed constantly from 1980 onwards.

Case 19: A 22 year old single female presented an 18 month history of left lower sternal pain. Course had been episodic, increasing in frequency until they had been occurring daily. One acutely severe episode had resulted in an emergency home visit by a GP. Onset was insidious. In terms of distress, severity was marked. In terms of disability, severity was moderate - responsibilities at work had been reduced, leisure activities curtailed, foreign holidays avoided, and mild depression of mood caused. Illness fear was moderate and was concerned mostly with heart disease. Mental preoccupation with symptoms was marked. Illness conviction was slight. A past history of frequent non-organic consultations had started in 1982 (age 20) and had continued until the end of my follow-up period in mid-1985. During this time, consultation rate had been high, averaging 14 per year, and approximately 12 different physical complaints of uncertain origin had been presented. These symptoms included, in 1982, lower abdominal pain, which could not be explained by a gynaecological assessment which included laparoscopy. There was no other medical history of note, and no previous psychiatric history.

The patient lived with her parents and siblings. She worked as a shop assistant. Her father had an interesting medical history - in 1978 (when our patient was 16) he attended a Gastroenterology clinic with abdominal symptoms, but after 4 years of attendance, which involved a whole range of investigations and a second opinion in London, no explanation was found. The period around the time of symptom onset was described by the patient as stressful - other than her father's health, a brother had been sent to prison. In addition to these background factors, the patient's mother had a history of psychiatric illness. Personality did not seem significantly abnormal.

After symptom onset, a variety of symptomatic treatments was given by the GP without benefit. 10 months after symptom onset, the patient attended a

Rheumatology clinic, and one follow-up visit took place. Investigations were normal and the final diagnosis was "minor mechanical disturbance in thoracic cage, possibly a degree of osteochondritis".

Shortly after my first research interview the patient attended her GP saying that the chest pain had virtually resolved. There then followed a series of consultations for headache, which resulted in referral to the practice counsellor. There then followed 6 months of consultations for varied symptoms, similar to the pattern of 1982. At my second interview, the patient claimed to be feeling generally much better. Although she said that the chest pain had not completely resolved, it was clear that the previous distress, disability, and illness fear had gone.

Summary of the General Practice Series

Only 8 index patients out of 873 consulters were detected. Screening of non-consulters, all non-consulters from practice 1, and a 1:5 sample from practice 2, had failed to reveal even a suspected index case. Thus, I conclude that the 8 index cases detected provide a prevalence figure (6 month period prevalence) of 8/1,736 for patients, in a community-based sample, with 'unexplained physical symptoms' of at least 6 months duration. In 7 of these 8 cases hospital management had taken place without benefit.

Some reservations can be made about some cases, so that even this low prevalence figure could be an over-estimate. In one patient (case 18) I expressed reservations about how adequately organic explanations had been excluded. This patient had episodic abdominal pain and a small hiatus hernia with gastro-oesophageal reflux had been demonstrated on barium meal 4 years before the survey. However, during subsequent detailed

investigations and follow-up at a Gastroenterology clinic, no reference was ever made to the possibility that this abnormal finding was responsible for symptoms. In another case (case 14) unexplained chest pain had followed coronary artery bypass surgery. This is a special situation in which organic and psychiatric explanations can be difficult to exclude. Psychiatric explanations for symptoms were not obvious in the group, otherwise patients would not have qualified as index cases, but psychiatric examination could not be thorough in the context of the research interview. In 3 cases psychiatric explanations may have emerged with more detailed evaluation. In case 12 a longstanding inability to relax was described by the patient, along with unspecified worry about her husband. It is possible that autonomic arousal and/or skeletal muscle tension, arising from an anxiety state, were responsible for the chronic thoracic back pain. Case 13 was the only case to have been referred to a psychiatrist. However, this referral had been to a psychotherapist primarily because of existential-type depression and personality difficulties - the type of depression known to produce physical symptoms was not evident. In case 17 it is possible that symptom perpetuation had resulted from the reinforcement of illness behaviour, partly by the patient's desire to avoid facing up to difficult life situations, and partly by the actions of a hospital clinic.

If an attempt is made to categorise these 8 cases along the lines used with the psychiatric outpatient

series (page 212), then 6 of the 8 had 'idiopathic pain disorder' (painful symptoms following a constant course), 1 patient had 'atypical panic disorder' (left sternal pain, of the type which can be produced by autonomic over-activity, following an episodic course)(case 19), and 1 patient could not be classified. This last patient (case 18) presented episodic abdominal pain, and it is noteworthy that this patient is the one about whom I expressed reservations about the exclusion of organic disease.

The ratio of patients with 'idiopathic pain disorder' to 'atypical panic disorder' is greater in the GP series (6:1) than in the psychiatric outpatient series (6:5).

As a means of further summarising the GP series, comparisons between this group and the psychiatric outpatient group will be made. Symptom duration was much greater in the GP series (mean of 6.1 years v mean of 2.4 years). In 10 of the 11 patients in the psychiatric series, symptom duration was 3 years or under, but this was so in only 3 of the 8 in the GP group. Nature of onset was contrasting. In the 6 patients from the GP series on whom information was available, onset was described as insidious. Whereas, in 10 of the 11 patients in the psychiatric group, onset had been described as acute or subacute. Symptom severity was roughly comparable between the groups. In the 6 patients in the GP series on whom information was available, either distress or disability was rated as moderate or

marked. Illness fear (fear of a sinister cause of symptoms) was present in only one case (case 19, the patient with 'atypical panic disorder'), demonstrating an association with the cardiac-type symptoms of 'atypical panic disorder' which was apparent in the psychiatric series. Mental preoccupation with symptoms was rated as moderate or marked in only 3 out of 6 patients in the GP series, while this had been a striking finding in the psychiatric series, being present in 10 out of 11. A past psychiatric history was present in 3 out of the 8 cases in the GP series, compared with none out of 11 in the psychiatric group, although psychiatric attention had been brief in all 3 cases and had not taken place for 12 years, 13 years, and 20 years, respectively.

In summary, only 8 patients with 'unexplained physical symptoms' of at least 6 months duration were detected out of a representative sample of 1,736 adults in the age range 20-59, registered with one of two general practices. The majority suffered painful symptoms which were following a constant course. Symptoms were at least moderate in severity. However, if the reservations concerning possible psychiatric and organic causes are taken into account, along with the prolonged symptom duration present in most cases, then it can be observed that examples of the type of case seen at the psychiatric outpatient clinic were very rare in this community sample.

The 'panel' method

A mention should be made of the 'panel of doctors' method, used in the hope of improving diagnostic reliability in cases with suspected 'unexplained' symptoms (see page 236). In 7 of the 8 index cases both the GP and myself completed 'diagnostic classifications' (Figure 1, page 237). I rated all 7 cases as 'neither organic nor psychiatric', using the working definition in use, whereas this rating was made by the GP in only 2 cases (cases 12 and 15). In 4 cases (cases 13, 16, 18 and 19) categorisations of 'probably organic' were made by the GPs, and in 1 case (case 17) 'psychiatric explanation' was recorded. Thus, the 'panel' method, in the form used in this study, did not provide the diagnostic agreement which was being sought.

The 'Excluded' Cases

Four case histories will be given in order to illustrate some of the difficulties encountered when trying to define 'chronic unexplained physical symptoms'. Each of these 4 patients underwent a research interview.

Case 20: A 52 year old married male gave a 10 year history of pain in both arms and paraesthesia in both hands. Laterally, symptom course had been constant. Severity was moderate-slight. Illness conviction was strong - the patient would not countenance even the possibility of psychogenic origin. Past medical history included unexplained abdominal pain which had continued for several years in the 1970s.

The patient attended a Rheumatology clinic in 1980, 6 years after symptom onset. An organic disorder was suspected but not diagnosed. Symptoms did not respond to treatment. The patient was lost to follow-up, but was re-referred in 1982. Cervical root irritation was diagnosed, but again there was no response to treatment. Again, follow-up did not take place as planned. The patient was re-referred and attended again in late-1985, after his research interview with myself. On this occasion, an unequivocal diagnosis of cervical spondylosis with root irritation at C6 was made, supported mostly by physical signs, but also by radiological findings.

Comment: This case illustrates the difficulty of adequately excluding organic explanations for symptoms. In this case, these difficulties partly related to administrative inefficiency at a hospital clinic. Prior to 1985 symptoms could have been regarded as 'unexplained' - this was certainly the view of the patient himself - but when a thorough physical evaluation eventually took place, an unequivocal organic diagnosis was made.

Case 21: A 52 year old female gave a 12 month history of abdominal pain and abdominal distension. Course was episodic. Severity was moderate-slight. Previous medical history included a bout of unexplained abdominal pain approximately 15 years earlier, which had coincided with a serious illness in her son.

Severely stressful life events had preceded the onset of these symptoms. These mostly concerned a life-threatening illness in her husband, Guillain-Barre syndrome and carcinoma of the lung, which had led to much hospital attention. In addition, her 28 year old son had taken an overdose. However, her husband's symptoms and prognosis had improved considerably about 6 months after the onset of her own abdominal symptoms, and this had coincided with an improvement in her own symptoms.

The patient attended a Gastroenterology clinic 4 months after symptom onset. Investigations were normal, and a diagnosis of 'irritable bowel syndrome' is contained in the medical correspondence, although the patient stated that she was told her symptoms were stress-induced, an explanation she readily accepted.

Comment: 'Irritable bowel syndrome' was discussed in chapter 6. I concluded that, on the basis of current

knowledge, symptoms attributed to 'irritable bowel syndrome' should be regarded as 'unexplained'. However, in this case, available information strongly suggests a 'psychiatric explanation' for symptoms, in the form of the effects of an anxiety state - the label of 'irritable bowel syndrome' may not have been appropriate in this case.

Case 22: A 43 divorced female presented a 10 month history of upper abdominal pain. Course had been constant. Severity was moderate. Illness fear was moderate, and concerned cancer. Mental preoccupation with symptoms was marked.

After symptom onset the patient received symptomatic treatments from her GP without benefit. 9 months after onset (only 1 month prior to my research interview), the patient attended a Gastroenterology clinic. Gastrosocopy revealed a small hiatus hernia but no oesophagitis. The patient had not been satisfied with this clinic visit, but when I saw her for a second research interview several weeks later, I learned that she had been much happier with her second clinic visit when she had obtained reassurance with she found acceptable. This seemed to coincide with complete resolution of her symptoms. The diagnosis from the Gastroenterology clinic, as recorded in the medical correspondence, was "probable irritable bowel syndrome with superadded reflux".

Comment: The question of possible organic explanation, in the form of hiatus hernia, is raised in this patient. But the main reason for discussing this case is the prompt remission of symptoms which occurred once adequate medical reassurance had been received, despite a symptom duration of over 10 months. Thus, at 6-10 months after symptom onset, this patient may have met my criteria for 'chronic unexplained physical symptoms', which would have been an inappropriate label as shown by subsequent events.

Case 23: A 24 year old married female gave a 12 month history of diarrhoea and a 6 month history of abdominal

pain. Course was episodic. In terms of distress, severity was moderate at the time of the first research interview, becoming slight by the time of the second research interview. There was no disability. There was a previous history of diarrhoea, bouts having often been related to stressful events such as starting college and sitting examinations. There was no previous history of abdominal pain. No stressful events had apparently preceded the present symptoms.

Symptomatic treatments were supplied by the GP - the diarrhoea partially responded, but the abdominal pain showed no response. The patient then attended a Gastroenterology clinic. Investigations were normal, except that sigmoidoscopy reproduced the abdominal pain. A diagnosis of 'irritable bowel syndrome' was made, symptomatic treatment given with partial success, and reassurance given which was readily accepted by the patient. By the time of the second research interview, episodes of symptoms were occurring infrequently and were causing the patient very little concern.

Comment: Although symptoms did not remit, they improved considerably once hospital investigations had been carried out and reassurance received. By this stage it would not have seemed appropriate to include the patient in any research study into chronic unexplained physical symptoms, such was the mildness of symptom severity. This case illustrates the need to stipulate a minimum degree of symptom severity when planning such research.

The 'Fluctuators' List (practice 1 only)

Patients were placed on the 'Fluctuators' list (in practice 1 only) if an eyeball inspection of their medical file suggested that consultation rate had been much higher than average, and that physical complaints had varied considerably. Although not an original aim, early observations of the medical files suggested that these patients could form an interesting group, relevant to the study. No quantification of the consultation patterns was performed during the survey surgery visits, and it is possible that some cases were missed. By the end of the survey, a total of 45 names had been placed on the list. It was difficult to decide how to quantify the consultation patterns, but in the first place, past medical histories, taken from the medical files, were dictated, along with details of every consultation from the beginning of 1980 to the start of the survey in May, 1984, which meant that virtually the entire 5 year period 1980-1984 was covered.

The first analysis consisted simply of counting the number of consultations for each patient over the 5 years, excluding those related to pregnancy, family planning, etc. (see page 239). The second analysis attempted to quantify the variation in physical complaints, concentrating on those for which the GP had not recorded an explanation. All new physical complaints for which no explanations had been recorded were also

summed for each patient. A new complaint was defined as one that had not been recorded in the medical file for a significant period, usually at least 6 months. 'Unexplained' physical complaints were differentiated from those for which organic or psychiatric causes had been recorded, and from psychiatric symptoms. The GP was always given the benefit of doubt, so that if 'gastritis', 'respiratory infection', or 'UTI', as examples, were recorded, the consultation was graded as organic, even if supporting evidence for the diagnosis was not provided. These assessments, done by myself, were therefore crude, but I believe that they contain some validity because the categorisation of most consultations was straightforward.

Thus, two numbers were compiled for each patient. One for the total number of consultations over the 5 year period, and one for the number of consultations which had been for newly presented physical complaints without a recorded explanation. These numbers were compared with the means for the entire practice 1 female patient sample. Female patients consulted 2.1 times per 'at risk' subject during the 6 months (Table 18), equivalent to a 5 year consultation rate of 21. The female consultation rate for newly presented 'unexplained' physical symptoms during the survey was calculated to be 0.6 per 'at risk' subject, equivalent to a 5 year rate of 6. These figures were arbitrarily increased by 50% to give 'fluctuator' thresholds of 32 and 9. In 7 patients out of the 45 on the 'Fluctuators' list, both the total

consultation rate and the 'unexplained' consultation rate lay below these numbers, and they were excluded. Table 21 summarises the results for the remaining 38 patients.

Table 21. Consultation Data and Subgroupings, Based on 1980 - 1984, for 38 Patients on the 'Fluctuators' List

	n	Total*	'Unexplained'*
1.Those above both 'fluctuator' thresholds	26(23 female)	44	14
2.Those above the 'unexplained' threshold but not the 'total' threshold	9(8 female)	24	10
3.Those above the 'total' threshold but not the 'unexplained' threshold	3(1 female)	37	7
Entire female sample	381	21	6

*Total=mean number of total consultations

*'Unexplained'=mean number of 'unexplained' consultations

Even if the less striking groups 2 and 3 are set aside, we therefore have 26 patients, most of whom are female, for whom total consultation rate was over twice the female sample population average at almost 9 per year, and the rate at which new physical complaints apparently not immediately explicable were presented was also over twice the population average. These patients were clearly much more prevalent than my index patients with chronic unexplained symptoms of the same type, and it was the 'fluctuators' who, at this general practice at least, represented the 'thick chart' patients, and who came to the minds of the GPs when they were asked to consider patients with unexplained or hypochondriacal symptoms. The patients with 'fluctuating' symptoms and those with chronic unexplained symptoms seem generally to be different groups, but there is some overlap - 2 of my 5 index patients in practice 1 were among the 26 'fluctuators', and at least 2 of my psychiatric series of 11 patients would probably have been above the consultation rate thresholds, judging by the information provided by their GPs.

Past Medical Histories

When the prevalence of prolonged unexplained physical symptoms was found during the 6 month prospective survey to be very low, past medical histories were examined (practice 1 only) to see if such episodes had occurred in the past, and if so, to determine how they had

progressed. This purusal of past medical histories revealed 33 patients with possible past episodes of prolonged unexplained symptoms, most of which had resulted in hospital referral, and the medical files of these 33 were re-examined in detail.

The striking impression was the apparent rarity of chronic unexplained physical symptoms, at least those of a significant severity, severity being estimated by the frequency of GP consultations along with medical action taken. None of the 33 patients had been referred to a psychiatrist for such symptoms. The majority of physical presentations requiring hospital referral but remaining unexplained were of a duration of less than 6 months. In many cases, once discharge from the hospital clinic occurred, and this often happened after just one visit, no further GP consultations for the complaint in question took place thereafter. Many such patients were found among the 'fluctuators', patients consulting frequently with varied complaints. A small proportion of patients did continue periodically to consult their GPs with the same symptoms after discharge from the hospital clinic. Unexplained gastro-intestinal symptoms were the most likely to follow this course.

It is possible that some patients continued to suffer distressing and disabling physical symptoms yet did not consult their GP and did not request further hospital attention, in the belief that no further medical help was possible. A chronic or relapsing course where severity

was very mild is another possibility. However, the firm impression on reviewing past medical histories was of single episodes of unexplained symptoms, rarely lasting longer than 6 months. If this impression was to be correct, then it would suggest that for unexplained physical symptoms, hospital clinics as well as GPs see many more 'fluctuator' patients than patients with chronic unexplained disorders.

The 'Chronic Organic' List

During the survey in practice 1, a list had been compiled of consulters with chronic physical symptoms which were caused by an unequivocally diagnosed organic disease. The chronic diseases were subdivided into painful and non-painful. Numbers are probably slight under-estimates. 19 patients were listed as having chronic painful diseases, and in 12, these were musculo-skeletal most commonly rheumatoid arthritis. 31 patients had non-painful chronic conditions such as asthma, chronic obstructive airways disease, epilepsy, liver disease, and psoriasis. Hypertension was not included. The purpose of outlining these approximate findings is to contrast the numbers of patients with chronic explained physical symptoms against those with chronic unexplained physical symptoms.

Symptom Analysis (practice 1 only)

All consultations for the practice 1 sample were

analysed and each complaint coded. Symptom analysis has been performed in one previous general practice study by Morrell and colleagues (Morrell et al. 1971a; Morrell, 1972). As far as possible, only one complaint, the predominant one, was coded for each consultation. However, if two or more clearly unrelated complaints were documented then each was coded. In the study by Morrell's group, only one complaint was allowed for each consultation. Each complaint was coded by myself in 3 ways. The first (Figure 2.a) described the symptom in terms of type and site. This coding was very closely based on that used by Morrell's group (Morrell et al. 1971a). I did not find it difficult to apply this code to the vast majority of symptoms. In some cases, a certain amount of interpretation was required, for example, 'urinary symptoms' was coded as disturbance of bladder function (code 44), 'U.R.T.I.' was coded as pain in throat (06), and 'sinusitis' was coded as nasal discharge (50). The second code (Figure 2.b) differentiated 'new' complaints from complaints which were the subject of follow-up consultations. A 'new' complaint was one which had not been presented for several months, judging by the absence of any references to it in the GPs' notes. I allowed myself a certain amount of judgement in determining 'new' complaints. Morrell and colleagues defined 'new' complaints as those which had not required medical consultation for at least 12 months, a definition which almost certainly excluded some newly recurring episodes of symptoms. The third code (Figure 2.c) concerned recorded diagnosis. Acute

Figure 2.a Code Used for Symptom Type and Site

(modified from that used by Morrell et al. 1971a)

- 00 Pregnancy-related (including delayed menstrual period, infertility)
- 01 Administrative requests, miscellaneous
- 02 Family planning (including sterilisation, routine cervical smear)

Pain (special organ)

- 03 Eye
- 04 Ear
- 05 Mouth
- 06 Throat
- 07 Joints
- 08 Genital organs
- 09 Excretory organs

Pain (part of body)

- 10 Head
- 11 Neck
- 12 Face
- 13 Chest
- 14 Abdomen
- 15 Back
- 16 Upper limb
- 17 Lower limb
- 18 Disturbance of sensation
- 19 Other pain

Figure 2.a (continued)

20 Psychiatric

Disturbance of function (somatic)

- 30 Vision
- 31 Hearing
- 32 Speech
- 33 Movement of head
- 34 Movement of face
- 35 Movement of neck
- 36 Movement of trunk
- 37 Movement of upper limb
- 38 Movement of lower limb
- 39 Other disturbances of movement

Disturbance of function (autonomic)

- 40 Appetite
- 41 Swallowing
- 42 Gastric function
- 43 Bowel function
- 44 Bladder function
- 45 Menstruation
- 46 Heart rate
- 47 Breathing
- 48 Cough
- 49 Other autonomic disturbance

- 50 Bleeding, Abnormal discharge, Trauma, Abnormal swelling

Figure 2.a (continued)

80 Skin disorder

Ill-defined symptoms

90 Temperature

91 Energy

92 Balance

93 Malaise

94 Generalised aches

95 Other ill-defined symptoms

96 Weight change

99 No symptoms

Figure 2.b Code Used for 'New' Complaints

N New

FUA Follow-up of acute disorder

FUC Follow-up of chronic disorder

Figure 2.c Code Used for Diagnostic Classification

A0 Acute organic

AU Acute unexplained

AP Acute psychiatric

CO Chronic organic

CU Chronic unexplained

CP Chronic psychiatric

HT Hypertension

NAD No abnormality

symptoms were differentiated from chronic depending on whether duration was less or greater than 6 months. And symptoms were separated into organic, psychiatric, and unexplained. 'Chronic unexplained' applied to the complaints of the small number of index patients described earlier in this section. 'Acute unexplained' simply referred to complaints for which a diagnosis had not been recorded.

Table 22 gives the distribution of all complaints depending on symptom type and site (code 1). Painful symptoms predominate, representing 41% of all complaints in females, and 37% in males. Approximately 50% of all complaints were classified by myself as 'new' (code 2). Table 23 shows the distribution of these in terms of symptom type and site, and it will be seen that this distribution does not greatly differ from that of all complaints - 42% of 'new' complaints in females were for painful symptoms, and 41% in males.

Table 24 breaks down the data depending on whether 'new' complaints were rated 'organic' or 'unexplained' (code 3). An organic diagnosis was seldom recorded for complaints in the categories 'pain in part of the body', 'autonomic function', and 'generalised'. Whereas, it had often been possible to record an organic explanation for complaints in the categories 'skin disorders', 'bleeding, abnormal discharges, trauma, abnormal swellings', and to a lesser extent, 'pain in special organs' which included throat pain and ear pain. In 89% of female complaints

Table 22. Distribution of All Complaints via Symptom

Type and Site (code 1)

	<u>Female</u>	<u>Male</u>
Consultations	797	502
Complaints	889	561
Pain (special organ)	8.8%	10.7%
Pain (part of body)	32.5%	26.7%
Function (somatic)(except Hearing)	0.7%	1.1%
Function (autonomic)(except Cough)	6.5%	5.9%
Ill-defined (except Weight change)	6.7%	8.6%
Psychiatric	16.7%	10.5%
Skin disorder	4.6%	7.8%
Bleeding, Abnormal discharge,	13.1%	14.1%
Trauma, Abnormal swelling		

Table 23. Distribution of 'New' Complaints via Symptom
Type and Site (code 1)

	<u>Female</u>	<u>Male</u>
Complaints	457	282
	(51.4% of total)	(50.3% of total)
Pain (special organ)	11.4%	12.1%
Pain (part of body)	30.9%	29.1%
Function (somatic)(except Hearing)	0%	0%
Function (autonomic)(except Cough)	10.3%	6.7%
Ill-defined (except Weight change)	8.8%	9.9%
Psychiatric	14.3%	6.0%
Skin disorder	7.2%	9.2%
Bleeding, Abnormal discharge, Trauma, Abnormal swelling	16.0%	17.0%

Table 24. Distribution of 'New' Complaints via
Diagnostic Classification (code 3) and Symptom
Type and Site (code 1)

	<u>Female</u>			<u>Male</u>		
	<u>No.</u>	<u>AO</u>	<u>AU</u>	<u>No.</u>	<u>AO</u>	<u>AU</u>
Pain (special organ)	52	60%	40%	34	71%	29%
Pain (part of body)	141	9%	89%	82	30%	70%
Function (somatic)	0			0		
(except Hearing)						
Function (autonomic)	47	34%	66%	19	26%	68%
(except Cough)						
Ill-defined	40	23%	75%	28	46%	54%
(except Weight change)						
Skin disorder	33	66%	33%	26	96%	4%
Bleeding, Abn. discharge,	73	78%	16%	48	98%	2%
Trauma, Abn. swelling						

AO=Organic AU=Unexplained

Abn.=Abnormal

concerning pain in some part of the body, diagnosis or explanation could not be recorded at the first consultation. For males this figure was 70%. There was a trend for female complaints to be coded as 'unexplained' more often, no matter the symptom type.

Outcome of New Complaints

For this analysis, new complaints from only the first 3 months of the survey were considered. This allowed the final 3 months to be used to investigate outcome. Complaints for both the sexes will be presented together because, on this occasion, no important differences between the sexes was found. 222 complaints were analysed. 68% of these complaints resulted in a single consultation only (Table 25), that is, no subsequent consultation for the same complaint occurred during the period before the end of the survey, a minimum of 3 months, and no other medical action was taken such as hospital referral. There were no striking differences between the symptom types as to whether single consultations only resulted, but 'pain in a part of the body' was slightly more likely to lead to more than one consultation. Nor was there an important difference between symptoms rated as 'organic' and those rated as 'unexplained', so that even if a clear explanation for a symptom was not apparent, in 66% of cases neither the patient nor the GP regarded the symptom as warranting even a second consultation.

Table 25. Number of Consultations Resulting from 'New'
Complaints

	<u>No. of</u>	<u>1 c.</u>	<u>2+ c.</u>
	<u>Complaints</u>		
Pain (special organ)	44	33(75%)	11(25%)
Pain (part of body)	115	72(63%)	43(37%)
Function (autonomic)	30	22(73%)	8(27%)
(except Cough)			
Ill-defined	33	25(76%)	8(24%)
(except Weight change)			
Total	222	152(68%)	70(32%)
AO	73	54(74%)	19(26%)
AU	149	98(66%)	51(34%)
Total	222	152	70

1 c.=single consultation 2+ c.=2 or more consultations

AO=acute organic AU=acute unexplained

The majority of complaints which resulted in more than one consultation in fact only resulted in two (Table 26). Symptom duration was seldom recorded for symptoms leading to only one or two consultations. As a guide to symptom duration, the intervals between first and last consultations were calculated for the 70 complaints which resulted in two or more consultations (Table 26). This interval was usually short, in most it was less than 3 weeks. For only 7 new complaints out of 222, were consultations continuing 13 weeks after the initial presentation.

Table 26. Outcome of 'New' Complaints Which Resulted in
2 or More Consultations

<u>No. of</u>	<u>2 c.</u>	<u>3 c.</u>	<u>4+ c.</u>		
<u>Complaints</u>					
70	45	12	13		
				<u>0-3 weeks*</u>	<u>4-7 weeks*</u>
				<u>8-12 weeks*</u>	<u>13+ weeks*</u>
70	42	13	8	7	

2 c, 3 c, 4+ c = number of consultations

* = time interval between first and last consultation

PART III

DISCUSSION AND RECOMMENDATIONS

This Thesis has considered diagnostically puzzling physical symptoms - symptoms for which organic explanations and psychiatric explanations cannot be found with certainty. Because semantics have been a source of confusion in this field to date, I supplied (in chapter 1) definitions for a number of key terms used in this Thesis, such as 'physical symptoms', 'organic explanation', and 'psychiatric explanation'.

An important hypothesis underlying the Thesis, which runs counter to current views expressed in the literature, is that it cannot be assumed that all non-organic physical symptoms are caused by psychiatric illness, because a number of pathological mechanisms and aetiologies, which are not necessarily related to psychiatric illness, and which could produce non-organic symptoms, have not yet been adequately explored, and because research in general in this field has not yet been adequate.

In order to examine this hypothesis as clearly as possible, non-organic physical symptoms were sub-divided into those for which 'psychiatric explanations' can be confidently diagnosed, and those without any apparent explanation. This latter category was termed 'unexplained physical symptoms' and a definition was provided (chapter 1, page 17). It was appreciated that

'unexplained physical symptoms' cannot be divorced entirely from symptoms with organic explanations and symptoms with psychiatric explanations, because the mechanisms and aetiologies involved in 'unexplained physical symptoms' can almost certainly also occur with these other symptoms. However, it was decided that, for the sake of clarity, symptoms for which organic and psychiatric explanations had been excluded would be the focus of this Thesis.

The present state of knowledge concerning 'unexplained physical symptoms' was examined via a review of the literature. Using some of the findings of the literature review, a preliminary clinical investigation was designed and carried out, in the hope of advancing knowledge in this field, and also in the hope of exploring methods of investigation which could be used in future research.

This chapter will first summarise the main findings of the literature review, followed by a summary of the main findings of the clinical investigation with a discussion of the methodological limitations contained in this investigation, and will then discuss some important issues arising from the whole study. The section headings which will be used in this chapter are as follows:

1. Summary of Main Findings of the Literature Review
2. Summary of Main Findings of the Clinical

Investigation

3. Methodological Issues Concerning the Clinical

Investigation

4. An Examination of the Role of Psychiatric Illness
5. The Benefits of Recording Clinical Descriptive

Information

6. The Phenomenon of Frequent Medical Consultations
for Varied Complaints

Section 1 Summary of Main Findings of the Literature Review

In chapter 1 the range of terms used in the previous literature to describe diagnostically puzzling physical symptoms was outlined. These included 'psychogenic', 'somatisation', 'hypochondriacal', 'hysterical', 'functional', 'psychosomatic', and 'abnormal illness behaviour'. Evidence against the use of these terms was presented, and the simple descriptive, and less ambiguous, term 'unexplained' was proposed.

Terminology led on to classification, and in chapter 2 the current methods of classifying 'unexplained' physical symptoms were examined, and were found to be in very early stages of development. The principles of classification and validity as applied to disease

entities were examined. One of these principles states that when new disease entities are being developed, clinical syndromes which at least have descriptive validity and face validity should be established, before attempts are made to incorporate into the classification system, information concerning pathological mechanisms and aetiology. It was discovered that this fundamental approach has not yet been taken for disorders which consist of 'unexplained' physical symptoms. It was shown that little valid work using ICD-9 categories has taken place. More work has been carried out using DSM-III, in which a specific category of disorders, the Somatoform Disorders, has been created for some non-organic physical symptom states. However, even within DSM-III, it was seen that only 'somatisation disorder', 'hypochondriasis', and 'atypical somatoform disorder' are available categories with which to classify 'unexplained' physical symptoms, and these categories represent diagnostic entities in need of much further research. It was also suggested that methods of classification other than the categorical, such as the multiaxial and the statistical, might be worth exploring for disorders consisting of 'unexplained physical symptoms'.

Before proceeding with the body of the literature review, chapter 3 considered a methodological issue, which concerns research into non-organic physical symptoms, namely, the confident exclusion of organic disease. It was discovered that further research has been called for to improve methods of differentiating

between organic and non-organic symptoms, and it was concluded that, until this research is carried out, all research, past and present, into non-organic physical symptoms must accept this handicap. It was proposed that routine clinical diagnosis to exclude organic disease is not reliable enough to allow adequate research on 'unexplained' physical symptoms to take place. Until improved diagnostic methods are developed, it was suggested that reliability could be improved by the use of methods such as 'panels' of specialists, and confidence scores.

Chapter 4 examined the psychiatric disorders which can produce non-organic physical symptoms. Although much remains to be discovered about the pathological mechanisms and aetiologies involved in the disorders discussed in this chapter, such as depressive illness and anxiety states, I suggested that enough is known to justify the statement that these disorders provide a 'psychiatric explanation' for some non-organic physical symptoms. An exception is somatisation disorder which is a clinical syndromal diagnosis, and for which little is known about mechanisms and aetiology. I suggested that it was debatable whether, in the light of present knowledge, somatisation disorder should be regarded as an 'explanation' for physical symptoms. I did not deny, however, that somatisation disorder is worthy of further research. Attention was drawn to panic disorder, a category newly introduced in DSM-III, as a potential occult psychiatric cause of episodic physical symptoms.

The present diagnostic criteria for panic disorder stipulate the presence of apprehension/fear, but it was pointed out that this may require revision should it be confirmed that some individuals are unable to experience these psychological phenomena because of 'alexithymia'.

The Literature on Unexplained Physical Symptoms

The remainder of the literature review concentrated upon 'unexplained' physical symptoms, and examined current knowledge on clinical features, prevalence and clinical importance, pathological mechanisms, aetiologies, and treatment, all issues important to any medical condition. Examination of this literature was not assisted by the presence of a number of methodological limitations in previous studies, one of which was the failure to investigate separately, patients for whom non-organic symptoms had psychiatric explanations, from those without such explanations. This methodological deficiency could have origins in the conceptualisation of non-organic physical symptoms, which in the past has tended to view all non-organic symptoms as psychiatric in origin.

Given this methodological limitation, along with others, it was not surprising to find that accurate prevalence data for 'unexplained' physical symptoms is not available (chapter 6). Available data does, however, point to two consistent findings. Firstly, the prevalence of physical symptoms of all origins in the

community is very high, between 60%-80% in several studies. Most of these symptoms are presumably minor, but this has not been established with certainty. Secondly, in a significant proportion of patients attending doctors in primary care or hospital with physical complaints, organic explanations are not found. Carefully collected hospital data in some studies put this proportion at between 30%-80%. However, it is not known what proportions of these complaints are short-lived, resolve after the receipt of reassurance, or are caused by psychiatric illness.

One indication that a significant proportion of patients exists, especially in the hospital setting, with persistent symptoms, not responsive to reassurance, and not due to straight-forward psychiatric illness, is the number of review articles written by clinicians describing the management problems caused by such patients. However, it has to be repeated that the exact prevalence of persistent unexplained physical symptoms not apparently caused by psychiatric illness is not known.

Chapter 5 reviewed clinical knowledge regarding unexplained physical symptoms. This knowledge was found to be preliminary. Most previous studies had examined patients with non-organic symptoms in general, usually applying various psychiatric and psychological measures, and comparing a non-organic group with a group with organic symptoms. While this form of research represents

an important first step, the ability to reach confident conclusions is limited.

This chapter included a review of the prominent literature on hypochondriasis and hysteria. This was done because, firstly, it was observed that most previous studies which had examined these entities had, in fact, investigated patients with non-organic or unexplained physical symptoms, and secondly, it was noted that this literature has been influential within psychiatry in the attempts to understand unexplained physical symptoms. Among several methodological limitations contained in clinical studies on hypochondriasis and hysteria, was the range of definitions used for these terms. Furthermore, evidence could not be found to support validity for these entities as independent disorders, and the trend, which is more evident in the U.S.A. than in the U.K., to avoid the use of these terms was supported.

The remainder of chapter 5 examined the previous clinical studies and review articles which have considered non-organic physical symptoms. A consistent finding has been a high prevalence of psychiatric morbidity among patients with non-organic symptoms. Many other findings have been made and these were described. Among examples of the most valid findings were a causative role for severely stressful life events, and an association between non-organic symptoms and impaired ability to express emotion verbally (alexithymia). The strong association between non-organic physical symptoms

and psychiatric morbidity has led many authors to conclude that psychiatric disorders are the most common cause of such symptoms. I argued that, given the methodological limitations contained in all studies, this conclusion could not be reached with certainty. Furthermore, in almost all studies, patient subgroups had apparently been present in whom psychiatric morbidity had not been found. The following methodological limitations were present in most studies: 1. unrepresentative patient samples, 2. failure to describe clinical states in detail, and subclassify patient samples, firstly via the presence or absence of likely psychiatric causes of symptoms, secondly using variables concerning the physical symptoms themselves, 3. use of methods of measurement and assessment of uncertain reliability, 4. reliance on cross-sectional study designs, 5. use of unmatched comparison groups.

I suggested that further research was needed to clarify the nature of the association between non-organic physical symptoms and psychiatric morbidity, to try and determine how much of this association is causal and how much is independent, and if causal, how often is psychiatric disorder a cause of physical symptoms and how often is it an effect. In addition, it was advocated that research be focused on patients for whom psychiatric aetiology can be confidently ruled out - that is, patients with 'unexplained physical symptoms' as defined by myself.

As gauged by the distribution of papers, the review of literature for chapters 5 and 6 suggested that non-organic symptoms are most commonly painful in type, followed in prevalence by symptoms of the autonomic function type. In order to facilitate better research into unexplained pain, one set of authors (Williams & Spitzer, 1982) have proposed the term 'idiopathic pain disorder' to describe any unexplained pain of at least 6 months duration, avoiding the need to establish aetiology as demanded, for example, by the diagnostic criteria in DSM-III for psychogenic pain disorder. If unexplained pain is the most important 'unexplained' physical symptom, then future research will have to face an additional methodological problem because pain, a subjective phenomenon, is difficult to measure reliably, a topic discussed in chapter 7.

Chapters 7 and 8 reviewed the interesting and growing literature which has examined a number of pathological mechanisms and aetiologies, which could produce physical symptoms independently of known organic disease and psychiatric illness. The point was made that these mechanisms and aetiologies almost certainly also contribute to the production of physical symptoms of organic and psychiatric origins. It was concluded that much more research is needed into mechanisms involving pain perception, sensory perception, and the autonomic nervous system; and aetiologies involving gender, age, personality especially 'alexithymia', central nervous system function, psychodynamic factors, sociocultural

factors, life events, and behavioural reinforcement. The point was also made that aetiology can be subdivided into predisposing, precipitating, and perpetuating, and it was recommended that research into the aetiology of 'unexplained' physical symptoms makes this distinction.

Conclusion to Section 1

The literature review tended, in my view, to raise many questions but to answer only a few. Nevertheless, it was encouraging to find that so much research has taken place, especially over recent years, because it was apparent on reading this literature that research in this field has been neglected in the past. This might partly be explained by the fact that unexplained physical symptoms have tended to fall between the clinical remit of physicians and psychiatrists.

It was concluded that existing knowledge could be used as a basis for planning further research in the following areas, giving careful attention to methodology: 1. reliable exclusion of organic explanations for symptoms, 2. detailed clinical descriptions of patients, and the use of this data to improve the syndromal classification of disorders which consist of unexplained physical symptoms, 3. the investigation of the relationship between non-organic physical symptoms and psychiatric illness, 4. the investigation of prevalence, clinical importance, pathological mechanisms, aetiologies, and treatments, for syndromes which consist of unexplained physical symptoms once these have been validated.

Section 2 Summary of Main Findings of the Clinical
Investigation

The Series of Psychiatric Patients

A series of 11 psychiatric outpatients with 'unexplained physical symptoms' of at least 6 months duration was described. In all cases, reassurance and symptomatic treatment from patients' GPs had not improved symptoms, and in 9 of the 11 cases, hospital management, consisting at least of exclusion of organic disease and reassurance, had also been ineffective. This was not a representative sample so only limited conclusions could be drawn. The main purpose in studying these patients was to explore the merit of describing clinical states in detail in order to use this descriptive information to try and improve classification of 'unexplained' physical symptoms. This had been one of the lines of future research to which the literature review had pointed.

Two broad groups of patients were found. In one, symptom course was constant and symptoms were mostly painful in type, although symptoms of the autonomic function type occurred in some cases. In the second group, symptom course was episodic and symptom type was mixed, painful and autonomic function type symptoms occurring together, although the painful symptoms mostly involved localised chest pain and headache, known effects of autonomic nervous system over-activity. The first

group was tentatively termed 'idiopathic pain disorder' and the second, 'atypical panic disorder', and it was concluded that, even on the basis of such a small sample, attempts at syndromal classification for unexplained physical symptoms are worth pursuing.

Some other findings of potential interest were made. Symptom onset was reported as being acute or subacute in 10 of the 11 patients, with an acute and often very frightening onset being reported more commonly in patients with the episodic symptom course. An organic cause of symptom onset seemed very likely in one case (case 2), while in some others, a minor organic precipitating cause, such as viral illness or supraventricular tachycardia, could not be ruled out. Symptom severity was more likely to be rated in terms of distress, as distinct from disability, in the group with the episodic symptom course, whereas in the patients with constant symptom course, distress and disability were equally rated, looking at the group as a whole. Illness fear was a variable finding but was more common in the episodic course group, although patients in this group more commonly experienced 'cardiac-type' symptoms.

Psychiatric illness in the form of depressive illness was present in 7 of the 11 patients, but as these patients were psychiatric referrals, this finding is difficult to interpret. In all cases, the depressive illness seemed to post-date the onset of the physical symptoms. The degree of mental preoccupation with

symptoms - their existence, their source, their prognosis, or their consequences - was striking in all patients, except one.

Previous history of psychiatric illness was absent in all patients, as were any gross disturbances of personality. Two personality characteristics seemed worthy of special mention - proneness to worried preoccupation, and 'alexithymia'.

An attempt was also made to investigate psychiatric referrals with chronic unexplained physical symptoms via a Case Register. This attempt appeared to confirm my suspicion, aired in the literature review, that ICD-9 is inadequate to allow for the classification of these symptoms.

The General Practice Study

In an attempt to describe a representative sample of patients with chronic 'unexplained physical symptoms' and to provide prevalence data, aims again drawn from the literature review, a sample of 1,736 adults, aged 20-59, registered with two general practices was screened. Only 8 cases were detected. This low prevalence (6 month period prevalence) can be compared with 50/841 for chronic organic physical symptoms, and 26/841 for 'fluctuators', patients who consulted at least twice the practice average and who presented a large variety of physical complaints. Prevalence data can be difficult to

assimilate because, although 8/1,736 seems very low, this would produce approximately 460 cases in a city the size of Southampton (approximately 100,000 adults in the age range 20-59).

When the general practice and psychiatric series were compared, some similarities and some differences were detected. It was possible to categorise 7 of the 8 patients in the GP sample along similar lines to those in the psychiatric sample - a group with constant pain ('idiopathic pain disorder'), and a group with episodic symptoms of the type caused by autonomic over-activity ('atypical panic disorder'). One patient could not be categorised in this way. Illness fear was associated with the group with episodic symptom course, a finding also made in the psychiatric series.

Differences between the GP and psychiatric series concerned symptom onset, presence of psychiatric illness, and degree of mental preoccupation with symptoms. Onset had been described as acute or subacute in 10 of the 11 psychiatric patients, while this was found in none of the GP patients. Overt psychiatric illness in the form of depressive illness was diagnosed by myself in 7 of the 11 psychiatric patients, but in none of the GP patients, although examination was much less thorough in the latter. Finally, mental preoccupation with symptoms was rated as marked or moderate in 3/6 in the GP series compared with 10/11 in the psychiatric series.

Consultation Patterns

It was noted by myself that a subgroup of patients consulted their GP very frequently and also presented, over time, a variety of unexplained physical symptoms. An attempt was made to quantify this, using data from one of the practices. 26 patients were detected who, on average, had consulted 44 times over the previous 5 years and had presented an average of 14 unexplained, new physical complaints during this period. Both sets of figures were over twice those for the whole female study population, which in turn were substantially higher than for the male population. 23 of the 26 'fluctuators' were female, a gender preponderance which had not been found for the two series of patients with chronic unexplained physical symptoms, especially those with 'idiopathic pain disorder'. Two of the 5 index patients in practice 1 were among these 26 'fluctuators'. Detailed information on consultation patterns was not obtained for the patients in the psychiatric series, but provisional information suggested that at least 2 of the 11 cases might have qualified as 'fluctuators'.

The documentation of past medical histories revealed several instances in which physical symptoms had resulted in hospital referral but had remained unexplained. This clinical information was difficult to quantify but a strong impression was gained that such symptoms had usually been relatively short-lived and that once

discharge from the hospital clinic had taken place, GP consultations for the same complaint had seldom followed.

Similar findings were made for patients placed, during the survey, on the 'Follow-up' list, these being patients who appeared to have unexplained symptoms but of less than 6 months duration, and where a degree of severity was suggested, by the presence of repeat consultation, hospital referral, or the symptom duration itself. The medical files of 88 patients, from both practices, placed on this list were monitored for several months after the end of the survey, and in approximately 2/3, symptoms appeared to resolve because consultations ceased. In the majority of the remainder, the eventual diagnosis was an organic one. Thus, even for symptoms which were more severe and more prolonged than average, apparent resolution usually occurred within a few months, often apparently spontaneously.

The bulk of physical symptoms presenting to the general practitioners seemed transient in nature, using the need to consult as an index of severity. Approximately 50% of all physical complaints were apparently for new episodes, and of these, 68% resulted only in a single consultation. This latter figure was approximately the same for symptoms for which an organic explanation had been recorded in the medical file, and for those without a recorded explanation.

Conclusion to Section 2

The value of using clinical descriptive data as a basis for syndromal classification was given some support. Tentative support was given to the proposal by Williams & Spitzer (1982) to create a diagnostic category called 'idiopathic pain disorder', and to the suggestion by Jones (1984) that panic disorder can be diagnosed in the absence of psychological symptoms ('atypical panic disorder'). A second broad classification emerged - on the one hand, prolonged unexplained physical symptoms, and on the other, the varied, usually short-term symptoms of patients described as 'fluctuators'. Rather to my surprise, the prevalence of the latter was much higher than that of chronic unexplained physical symptoms, whose prevalence, in this community sample, was rather low (8/1,736). This prevalence data, provisional as it is, has not to my knowledge been produced before.

Other findings of potential interest were made. An acute and often frightening symptom onset was found in several cases. An excessive reaction to this event could be classified as 'adjustment disorder' and could be considered a potential cause of symptom perpetuation. A possible role for attention in perpetuating symptoms was raised - a fault in neurophysiological attention, one of the mechanisms discussed in chapter 7, could be implicated, but no conclusions can be reached on this

possibility on the basis of my study. Alexithymia was a suspected finding in some patients with chronic pain ('idiopathic pain disorder'), but this was not formally measured. Female preponderance, a common finding for many forms of morbidity in medicine, was not found for chronic unexplained physical symptoms, but its presence was striking for the 'fluctuators'. Female preponderance was also found for consultation rates in general in the general practices. Behavioural reinforcers resulting in symptom perpetuation were not clearly found. If they had been, the case would not have qualified as 'unexplained'. However, the assessments needed to evaluate all possible reinforcers in a patient's life might be more detailed than I was always able to perform. For several patients, symptom duration had been at least 2 years by the time I met them - it is possible that the effects of sheer chronicity in perpetuating symptoms is important, because of subtle role changes which result, and which tend to perpetuate illness behaviour.

Section 3 Methodological Issues Concerning the Clinical Investigation

In chapter 5 I criticised some of the interpretations and conclusions made by authors of previous clinical studies into non-organic and unexplained physical symptoms because of the presence of methodological limitations in these studies which were outlined in section 1 of this chapter (page 286). Has my study improved on these methodological deficiencies?

1. Patient samples: One of the most important reasons for basing the principal investigation in general practice was to try and study a population approximately representative of the general population, a step not previously carried out in research into unexplained physical symptoms. Considerable efforts were made to obtain a sample representative of all patients registered with the practices, and to try and ensure that only those patients 'at risk' of consulting were included in the final sample. On the whole, I feel that this aim was met (see chapter 11, page 231), but two main limitations indicated that true representativeness could not be claimed. Firstly, the age-sex registers were not up to date, and as the patient samples were based on the registers, it is possible that they did not fully represent patients registered and 'at risk' at the time of the survey. Secondly, the mobile population, those

leaving and arriving at the practices during the survey, were not represented.

As far as the psychiatric series is concerned, no claims were made as to its representativeness, and conclusions were modified accordingly.

2. Clinical descriptions and working definitions:

Another important aim of the investigation was to provide detailed clinical descriptions of patients, and this was achieved by including case histories in this Thesis which adopted a standardised format so that information on certain important clinical variables was recorded for every case. Working definitions were adopted for certain key concepts, namely, 'physical symptoms with organic explanations', 'physical symptoms with psychiatric explanation', and 'unexplained physical symptoms'.

3. Methods of assessment and measurement:

Quantifiable measures were not attempted in my study, but judgements were made in some areas and were based only on my examination, an area of potential bias. This particularly applied to the diagnosis of the presence or absence of depressive illness in the study patients, and to judging the presence or absence of 'chronic unexplained physical symptoms'. One counter to this methodological flaw is to publish clinical material, as I have done, and allow readers to make their own judgements. Nevertheless, the potential that subjective bias occurred in the collection and judgement of clinical

information remains.

Another method of assessment which requires critical examination is my method of screening the GP patient samples via the doctors' handwritten notes. Good records were kept in the two practices, and when this occurs, GP medical files can represent excellent means of screening for certain disorders because they often contain lifetime medical histories. This method should, however, be subject to reliability testing should it be used in any future research. For the detection of patients with possible unexplained physical symptoms of at least 6 months duration, I believe the method was reliable because it proved very easy to distinguish these patients from the bulk of consulters. The pick-up rate proved to be too high - several cases were excluded after my interview or after further follow-up, indicating that those who remained probably represented the total of true index cases. As far as non-consulters are concerned, it has been shown that GP non-consulters in the U.K. very rarely suffer serious and undetected illnesses (Kessel & Shepherd, 1965). Furthermore, medical files of all non-consulters in practice 1 and of a 1:5 sample in practice 2 were checked by myself, and no cases with even suspected chronic unexplained physical symptoms were found.

The same method was also used to examine consultation patterns, and much of these data must be regarded as very provisional, although some were reliably measured, such

as annual rates of consultation.

4. Cross-sectional study design: neither of these

5. Comparison groups: design faults was corrected in my study, with the result that I have been very cautious in interpreting findings. My descriptive study will be used principally to generate hypotheses, rather than to reach conclusions.

6. Exclusion of organic disease: An attempt to exclude organic causes of physical symptoms had been one of the original important aims of the clinical investigation. I had noted that this had been an issue possibly neglected in previous research in the field. However, this aim was not achieved. For the GP patients it was intended to use a 'panel' of 3 doctors, and seek unanimous verdicts. A specialist physician was asked to pass judgement on dictated summaries of cases, and this proved too difficult given the complexity of the cases. I did have the benefit, in most cases, of specialists' opinions as contained in hospital correspondence, but this source cannot be assumed to be wholly reliable. Only the patient's GP and myself therefore formed the 'panel'. Agreement on diagnostic classification was seldom obtained. The GPs tended to record 'probable organic explanation' when I had recorded 'unexplained'. It seemed that not all the GPs understood clearly my differentiation of organic explanation, psychiatric explanation, and no explanation, as defined in the sheet they were asked to complete (Figure 1, page 237),

especially when 'organic explanation' could include a 'functional overlay'.

I believe it is highly likely that organic causes were absent in all index cases, except in those few whose case histories contain reservations. However, the reliable exclusion of organic disease is an issue which will require greater attention in future research in this field. If the 'panel' method is adopted, and I believe it is potentially a reliable method, then certain improvements should be made to the approach taken in my study - very clear instructions to the doctors involved; personal examinations of patients and records by all doctors; and panel discussions to try and resolve disagreements.

Conclusion to Section 3

Given that this study was primarily intended to seek prevalence data and clinical descriptive information, so that only methodological issues 1, 2, 3, and 6 above are important, I believe that, while my findings cannot be regarded as wholly reliable, they are unlikely to be significantly inaccurate. Hence, I believe that these findings can be used as a basis for generating hypotheses and planning further research.

Section 4 An Examination of the Role of Psychiatric Illness

A consideration of the possibility that psychiatric illness produced the physical symptoms seen in my study patients is important, because I have proposed that this was unlikely, which is in keeping with my hypothesis which states that it cannot be assumed that non-organic physical symptoms are always caused by psychiatric illness. The only psychiatric illnesses which need to be considered are panic disorder, depressive illness, the Somatoform Disorders, and adjustment disorder. There was no question of any other psychiatric illnesses being present in any of the patients studied.

1. Panic disorder: Panic disorder was described in chapter 4 (page 46). No patient in this study had classical panic disorder, consisting of sudden episodes of intense apprehension or fear, associated with physical symptoms. However, a number of patients presented physical symptoms typical of those seen in panic disorder, and following the same episodic and unpredictable course. As a result I termed this group, for the sake of discussion, 'atypical panic disorder'. Several patients described the occurrence of mental symptoms of apprehension or fear but only after the onset of the physical symptoms and apparently in response to their effects. The question is raised whether these

cases represent a variant of panic disorder in which the typical mental symptoms do not occur. These mental symptoms could be masked by 'alexithymia' as has been proposed by Hill (1982) and Jones (1984). I therefore cannot exclude the possibility that panic disorder was present in some cases. On the basis of my preliminary findings, I would recommend further research to try and determine whether panic disorder can present with physical symptoms only. Great care would be needed to exclude organic causes of this episodic pattern of mostly autonomic function type symptoms, such as pheochromocytoma, hypoglycaemia, caffeine abuse, or amphetamine abuse.

Even if the presence of panic disorder was to be confirmed in some patients with episodic unexplained physical symptoms, the question of cause and effect would not be resolved by the cross-sectional studies usually performed. The development of panic disorder could be an effect of alarming and mysterious symptoms.

2. Depressive illness: It can be very difficult to assess the time of onset of depressive illness using retrospective reports of patients and even their relatives. Therefore, to exclude the possibility that the 'unexplained' physical symptoms seen in my patients were precipitated by depressive illness is very difficult. The cause and effect issue concerning non-organic physical symptoms (especially painful symptoms) and depressive illness is an issue of

considerable controversy (see chapter 5), and is unlikely to be quickly resolved. Nevertheless, it was my belief that in all my study patients, when depressive illness was present, this clearly post-dated the onset of physical symptoms, and I am therefore very reluctant to agree with the authors of previous studies who concluded that because depression was present, it was a likely cause of symptoms.

A significant proportion of patients in the psychiatric series displayed florid depressive illness. It seemed possible that, in many patients, this depression was acting as a perpetuating cause of physical symptoms, even although there was doubt about its role as a precipitating cause.

A number of study patients reported stressful life events prior to symptom onset which could, in theory, have precipitated physical symptoms perhaps via depressive illness. On an individual basis it is very difficult to judge retrospectively the role of such life events. Large scale studies are required, incorporating comparison groups, such as that of Creed (1981) who established a causative role for certain life events with unexplained abdominal pain (although his clinical series was not adequately subclassified).

3. Somatoform Disorders: The Somatoform Disorders were described in chapters 2 and 4. No cases fitting the DSM-III criteria for conversion disorder,

hypochondriasis, and atypical somatoform disorder were detected among the study patients. This leaves psychogenic pain disorder and somatisation disorder to be considered.

(a) psychogenic pain disorder: Several patients in both the psychiatric and GP series were suffering from chronic unexplained pain. Could psychogenic pain disorder have been diagnosed? This would be possible if 'psychological factors were judged to be aetiologically involved' (see page 52), either in the precipitation or the perpetuation of the pain. Re-examination of case histories only revealed two possible cases among the psychiatric series, thus leaving a large number of patients without apparent psychological causes. In case 4 a number of stressful events had occurred prior to symptom onset - an unhappy house move, development of leukaemia in a daughter, loss of mothering role, loss of job. These could have precipitated the painful symptoms, and could also have acted as perpetuants as could have marital dysharmony which developed after symptom onset. In case 2 pain was almost certainly precipitated organically, but psychogenic perpetuation was possible because serious illnesses developed in two relatives (a son and mother) and two others died (father-in-law and an uncle) during the 12 months after symptom onset. In the GP series, perpetuating causes of pain were considered possible in one case (case 17).

Nevertheless, it is difficult on an individual basis

to be sure that such life events are causative of pain, and it may not be satisfactory that the diagnosis of a psychiatric disorder is so dependent on the judgement on this matter by an individual psychiatrist. Also, once psychogenic pain disorder has been diagnosed, there could be an implication that the symptoms in question are fully explained, with the result that possible contributions of other factors are not properly assessed.

Looking at the index patients as a whole, I do not therefore believe that psychogenic pain disorder was common. I would propose using my preliminary findings to support Williams & Spitzer (1982) in their proposal to adopt the term 'idiopathic pain disorder' (see page 128) to refer to all unexplained pain of at least 6 months duration, and to replace 'psychogenic pain disorder'.

(b) somatisation disorder: Insufficient information was available to allow any definite diagnoses of somatisation disorder. Indeed, even although I often had lifetime medical records before me (something surely uncommon in the U.S.A., from where most published work on somatisation disorder has come), I was struck by the difficulty in establishing this diagnosis, given that at least 14 symptoms (12 for men) from a specific symptom list require to have occurred over a period starting before the age of 30, symptoms which had been judged by the doctor involved not to have organic explanations (see Table 9, page 56). Even good GP records seemed to be inadequate to allow this retrospective evaluation.

Nevertheless, it seemed very likely that diagnostic criteria for somatisation disorder would have been met in cases 16, 17 and 19 from the GP series, and possibly in cases 1 and 9 from the psychiatric series. Many more potential examples of somatisation disorder appeared to be present among the 'fluctuators', patients with frequent consultations for non-organic symptoms, usually short-lived. Thus, potential somatisation disorder, or its variant, appeared to be found both in patients with frequent short-lived symptoms and in patients with prolonged symptoms. Another crossing of boundaries was present in the 5 cases referred to above, because 3 of them had constant painful symptoms ('idiopathic pain disorder') and 2 had episodic symptoms ('atypical panic disorder').

Hence, somatisation disorder does not fit easily into the symptom patterns found in my patient series. It is of course a purely descriptive diagnosis - no reference in the diagnostic criteria is made to aetiology, which is said to be unknown. Perhaps somatisation disorder, as a descriptive entity, should be used as a vehicle to allow further research, rather than be regarded as a psychiatric disorder in its own right. Alternatively, it could be regarded as a trait or a disorder of personality, a suggestion made by Hyler & Sussman (1984), which could act as a predisposing contributory cause of chronic unexplained symptoms. I would certainly be loathe to regard somatisation disorder as a 'psychiatric

explanation' for any of the symptoms seen in this investigation.

4. Adjustment disorder: A surprisingly large number of patients in the psychiatric series described their symptom onset as acute, and some described severe alarm. The persistence of unusual degrees of alarm would probably qualify as adjustment disorder as defined in DSM-III (see page 53). By definition, adjustment disorder remits in time, but it is possible that this disorder can progress to established depressive illness or anxiety state which could, in turn, continue to perpetuate the physical symptoms. It is therefore possible that, had some patients been examined early in their symptom course, the diagnosis of a psychiatric explanation, in the form of adjustment disorder, would have been justified.

Conclusion to Section 4

I would conclude that panic disorder and adjustment disorder deserve some consideration as possible precipitating causes of some of the physical symptoms seen in this study, but that psychogenic pain disorder, somatisation disorder, and (to a lesser extent) depressive illness were unlikely explanations for symptom precipitation. Depressive illness was nevertheless a common finding, at least in the psychiatric series, and it was not possible to rule out a precipitating role with

certainty in some patients.

A complex interaction between depressive illness, panic disorder, and unexplained physical symptoms emerges from my clinical investigation and from the literature review. The unravelling of this interaction by future research can be anticipated with great interest. We have evidence linking depressive illness and panic disorder (see Breier et al. 1985), and much evidence to associate unexplained chronic pain and depressive illness (see Roy et al. 1984). This and other evidence has encouraged one author (Swanson, 1984) to propose that chronic pain, chronic depression, and chronic anxiety are all neuropsychological disorders with similar underlying neurochemical abnormalities.

Section 5 The Benefits of Recording Clinical
Descriptive Information

In their recent review, Barsky & Klerman (1983) noted that there exists a dearth of basic descriptive information regarding the clinical states of patients with diagnostically unexplained physical symptoms. I attempted to improve this situation by recording detailed case histories and rating a number of important clinical variables in every case. These variables were: symptom type, symptom duration, symptom course, nature of onset, symptom severity in terms of distress and disability, presence of overt psychiatric illness, history of frequent non-organic medical consultations, illness fear, mental preoccupation with symptoms, and illness conviction. Was this approach beneficial? Benefit is suggested by the fact that, across the whole study group, the presence or absence of each item was variable and could not be assumed.

Symptom course: The careful recording of symptom course produced two fairly distinct groups of patients - those with constant symptoms, and those with short episodes of symptoms which seldom lasted greater than 3 hours.

Symptom type: Almost all symptoms were either painful in type or of the autonomic function type. Symptoms with

constant course tended to be painful in type, while episodic symptoms tended to be of the autonomic function type, but there was overlap. Nevertheless, I used symptom course and symptom type to provisionally propose the presence of two distinct clinical syndromes among my study patients - 'idiopathic pain disorder' and 'atypical panic disorder'.

Symptom duration: By the nature of the selection criteria, all index patients had chronic symptoms, defined as at least 6 months in duration. For some of these patients symptom duration was very long, 3 years or more. In some cases I suspected, but did not establish, that the effects of sheer chronicity were acting as a perpetuating cause of symptoms. This is one example of how the careful recording of symptom duration could be valuable. Another is the differentiation of long-term symptoms (say, 6 months or more) from short-term (say, less than 6 months, although the majority in general practice appear to be much less). The vast majority of short-term symptoms remit, usually with very little medical action. This was shown to be apparently true even for symptoms of a few months' duration by my 'follow-up', via medical files, of several patients in the GP study, and by my retrospective examination of several past unexplained symptom episodes which had resulted in hospital referral.

The picture emerged from the GP study that, for unexplained physical symptoms, symptom duration of

greater than 6 months is unusual. One could provisionally conclude from this that such symptoms should be vigorously treated, perhaps with the involvement of psychiatrists, before a chronic, and possibly self-perpetuating, stage is reached.

History of frequent non-organic medical consultations:

The range of consultation behaviour across the entire GP sample was remarkable. A subgroup of patients was identified (the 'fluctuators') in whom consultations were very frequent and complaints included a wide range of unexplained physical symptoms. The vast majority of these symptoms were short in duration, but for a few, duration was greater than 6 months, and these patients appeared as index cases. The 'fluctuators' were much more prevalent than those patients with chronic unexplained symptoms, and it was the 'fluctuators' for whom the GPs were inclined to apply the term 'hypochondriasis'.

Nature of onset: Careful examination with the patients of the circumstances surrounding the onset of symptoms appeared to be well worthwhile. Onset ranged from the very acute, through the subacute, to the insidious. It seems a fair assumption that the mechanisms and precipitating causes are likely to be different for acutely developing symptoms and insidious symptoms. Examination of onset also revealed that, for several patients, the acute symptoms had been severely frightening. This raised the possibility that emotional

trauma caused by this acute onset, possibly amounting to adjustment disorder, played a part in subsequent symptom perpetuation. A number of possible organic onsets were also detected - in these patients it is possible that only symptom perpetuation was unexplained, not symptom precipitation.

Symptom severity: The attempt to rate severity in terms of both distress and disability seemed to be worthwhile because the two often did not correspond. The rating of severity in more than one way has been recommended by those who have commented on the difficulty in reliably measuring symptom severity, especially for pain (see Reading, 1983). The recording of symptom severity in my study seemed to demonstrate that mild severity can be seen at hospital - for case 3 in the psychiatric series both distress and disability were rated as slight, and it was noteworthy that in this case, symptom resolution appeared to occur spontaneously because GP consultations stopped. With most chronic symptoms some disability, in the form of interferences with daily living, are to be expected. An assessment of disability can therefore be a useful guide where chronic symptoms are concerned. Disability has the advantage of being more amenable to objective and reliable rating than distress. If distress alone is present, this could reflect a propensity to emotional distress, rather than indicating underlying physical symptom severity.

Presence of psychiatric illness: This topic was discussed fully in section 4.

Illness fear: Justification appears to have been achieved for separating the three 'components' of hypochondriasis - illness fear, mental preoccupation with symptoms, and illness conviction, an issue discussed in chapter 5, because the presence of these three variables did not closely correlate with one another.

'Illness fear' refers to the presence of a fear of a sinister cause of symptoms, such as cancer or heart disease. Such a fear was not invariably present, even for severe symptoms. It was more prevalent among patients with episodic symptoms ('atypical panic disorder'), although patients in this group more commonly had symptoms which could have suggested heart disease. On the other hand, should this group be shown to have a panic disorder-like syndrome, then psychological symptoms like illness fear might not be unexpected. Mild illness fear is very common in the general population (see Agras et al. 1969). It is possible that individuals with this background are more likely to present a serious illness fear when they develop physical symptoms.

Mental preoccupation with symptoms: This phenomenon appeared to be worthy of enquiry, because its presence was striking among the series of psychiatric patients,

while its presence was less frequent among the GP series. When present, it seemed quite possible that symptom perpetuation was occurring via the attention mechanism. A propensity to such 'worried preoccupation' might be a trait of personality, and might be worth enquiring about in patients with unexplained physical symptoms.

Illness conviction: Illness conviction was also a variable finding. Extreme examples would not have been expected among my study patients, because they would not be expected to see a psychiatrist. Illness conviction implies a lack of response to reassurance given by an appropriate doctor, often a specialist. The potency of reassurance should not be under-estimated (see chapter 9). For case 22, in the GP study, quite severe unexplained abdominal symptoms had continued for 10 months until eventually the patient was seen by a consultant gastroenterologist, whose reassurance appeared to result in resolution.

Conclusion to Section 5

I conclude that the careful recording of clinical variables surrounding unexplained physical symptoms is worthwhile, and can be used to create provisional subclassifications. If this approach was to be taken with large patient series, then some valid clinical syndromes might emerge.

A number of items described above could be used to

explore a multiaxial classification system, an issue discussed in chapter 2. I would tentatively hypothesise, on the basis of some of the findings of this Thesis, that 'history of frequent non-organic medical consultations' will emerge as an axis independent of the other symptom variables, and that it will not be found to contribute usefully to the definitions of categorical-type syndromes.

The acquisition of clinical information, of the type described in this section, might benefit from the sort of self-report diaries used in the study of chest pain by Costa et al.(1985).

Section 6 The Phenomenon of Frequent Medical
Consultations for Varied Complaints

A striking observation made during the general practice survey was the wide range of consultation behaviour across the entire patient sample. Of particular interest to this study was the consultation pattern which consisted of frequent visits for varied and often apparently unexplained physical complaints (the 'fluctuators'). This specific consultation pattern has not been the subject of much research, although several studies have investigated the correlates of high consultation rates in general (for example, Hannay, 1979; Ingham & Miller, 1982).

It is probable that several patients in this study who displayed the 'fluctuator' consultation pattern would have fulfilled DSM-III diagnostic criteria for somatisation disorder. However, such a step would have disguised some possibly important characteristics of this consultation pattern. Firstly, the 'fluctuator' pattern appeared to be a dimensional measure across the whole patient population, rather than being simply present or absent. If this was to be confirmed, then somatisation disorder might simply reflect the far end of this continuum. Secondly, a certain amount of variation over time was apparent in some cases, so that for some years the 'fluctuator' pattern was much more striking than for

others. Attention would not be given to this symptom course if the only diagnostic criterion concerning symptom course used for somatisation disorder was applied, which refers only to onset before the age of 30.

Deighton & Nicol (1985), in a recently published study, also provided evidence that the consultation pattern associated with somatisation disorder might be a dimensional measure. This study appears to be the first to have examined somatisation disorder in the setting of a U.K. general practice. The medical files of all young women in one practice aged 16-25 were screened. 'Annual functional complaint rates' were calculated for all patients, and 51 patients with the highest rates were interviewed, as were 51 comparison subjects. In only 2 of the 51 was somatisation disorder (Briquet's syndrome) diagnosed. But the remaining patients resembled those with somatisation disorder (see chapter 4, page 54), not just because of high 'annual functional complaint rates', but also because of the increased prevalence of previous psychiatric morbidity, marital and occupational problems, alcohol abuse, and a family history of chronic or recurrent hospitalisation. The authors concluded that the concept of somatisation disorder might be too restrictive.

Thus, the pattern of frequent medical consultations for varied complaints, which may have an association with somatisation disorder, seems well worth further investigation and, despite the opinions of some U.K.

workers (Bass & Gardner, 1985), this research could ideally be based in the U.K. because of its system of primary care in which almost the entire population is registered with local doctors, who usually hold lifetime medical records for their patients.

The 'fluctuator' consultation pattern seen in my study appeared to be an exaggeration of the normal consultation pattern seen in the two practices, that is, short-lived complaints which were often not immediately explicable. Approximately 50% of all complaints seemed to concern new symptom episodes. Of these, 68% resulted only in the single consultation, and it was rare for new complaints to require over 3 consultations and to be still the subject of consultations 13 weeks after presentation. Of new complaints of the symptom types, painful, autonomic function, and generalised, 67% were not given a documented explanation by the GPs (Table 24). On this background, patients with developing chronic symptoms, whether unexplained or organic, should stand out. Because this is an unusual development, some important factors must be involved in its genesis. In the case of chronic organic symptoms, it is the organic disease process. In the case of chronic unexplained symptoms, it must be yet-to-be-discovered processes which must, nevertheless, be potent to produce such an uncommon occurrence.

The findings from this study seem to suggest that the high prevalence of unexplained or non-organic physical

symptoms found in community and general practice samples, an issue described in chapter 6, is caused by transient symptoms which may often belong to patients displaying the 'fluctuator' consultation pattern.

Some very tentative evidence was presented which suggested that a large proportion of patients with unexplained physical symptoms presenting at hospital clinics also have short-lived symptoms which usually remit, and that several also display the 'fluctuator' pattern. This picture was found when episodes which had resulted in hospital referral in the past, in 33 patients, were examined (page 262), and when follow-up took place for 88 patients with unexplained symptoms of less than 6 months duration, several of whom had been referred to hospital (page 243). Thus, it is possible that the prevalence data for non-organic physical symptoms seen at hospital (chapter 6) also often concerns symptoms which form part of the 'fluctuator' consultation pattern. This hypothesis requires considerably more descriptive research. If such a picture was to emerge from further research, then it would have important implications for management because, given that symptom episodes in such patients seem to remit easily, it would suggest that attempts should be made to reassure such patients firmly and discharge them from hospital attendance as soon as possible, thus avoiding potential iatrogenically induced chronicity.

Conclusion to Section 6

The consultation pattern seen in general practice which consists of frequent visits for varied short-lived physical complaints, which are seldom easily explicable, requires further research. This could include the development of methods of quantification, prevalence and descriptive data, and the investigation of aetiology and pathological mechanisms. Also in need of further research are the relationships between this consultation pattern and (i) somatisation disorder, (ii) the unexplained physical disorders seen at hospital, and (iii) chronic unexplained physical symptoms.

On the basis of findings from this study, this chapter will forward recommendations concerning further research and clinical practice, with emphasis on the former, and will briefly discuss the potential role of consultation-liaison psychiatry.

Recommendations Concerning Further Research

1. Representative patient samples based at hospital:

For disorders consisting of prolonged unexplained physical symptoms, future research should be based in the hospital setting, because of their apparent low prevalence in the general population. However, hospital research should pay careful attention to the representativeness of patient samples. All referrals to a general hospital serving a designated catchment area could be considered eligible for inclusion. If this was not feasible, then all referrals from a designated geographical area could be studied, for example, those from a particular group of general practices. All patients referred because of physical complaints should be eligible at least for a screening stage of any investigation.

2. Descriptive clinical information: Such

representative patient samples should be used to conduct descriptive clinical studies. A screening stage would

probably be helpful during which cases with clear-cut organic disease are excluded. This study should involve (i) detailed descriptions of clinical state, along the lines adopted in my investigation, (ii) diagnosis of the presence or absence of organic disease, and if present, determination whether this represents a likely explanation for symptoms, (iii) diagnosis of the presence or absence of psychiatric illness, and if present, whether this represents a likely explanation for symptoms.

Reliable methods of data collection should be used. For example, standardised history-recording sheets could be used by doctors, patient self-report diaries could be used, as could computer-assisted methods of history taking. Measures of inter-rater reliability should be made, at least for a subsample of patients, by using two or more medical interviewers. Test-retest reliability should be assessed by repeating the method of recording history after a short interval.

For the exclusion of organic explanations, all available methods to enhance reliability should be considered, such as special investigations, symptom profiles, confidence scores, and 'panels' of specialists. Psychiatric assessment should use one of the available standardised psychiatric interview schedules, such as the Present State Examination (Wing, 1983), the Standardised Psychiatric Interview (Goldberg et al. 1970), or one incorporating DSM-III diagnoses (see Hudson et al. 1985),

and these should preferably be performed by at least two raters. In order to determine whether psychiatric illness represents an explanation for presenting symptoms, the opinions of two or more psychiatrists should be obtained. The aim could be to reach consensus, or to calculate measures of inter-rater agreement.

3. Syndromal classification: Data storage should use an appropriate computer. Once a large enough sample of patients with 'unexplained' physical symptoms has been compiled, and I would suggest this should be at least 200, then a method of statistical analysis, such as cluster analysis, should be applied, to try and determine (i) whether clinical syndromes emerge, using the categorical method of classification, which appear to have descriptive validity, and (ii) whether the use of a multiaxial system of classification would be more useful in some cases. In support of this consideration of the multiaxial method, I repeat the speculative hypothesis, forwarded in chapter 12, that the 'fluctuator' consultation pattern will be best classified as an axis in a multiaxial system, rather than being useful in a purely categorical system.

4. Validity: Should clinical syndromes emerge from the above analysis, then steps should be taken to investigate validity. Descriptive validity could be examined by comparing, statistically, the clinical features of these syndromes, in an effort to determine how discrete the syndromes are. The opinions of leading

experts could be sought in order to evaluate face validity. Follow-up studies should take place to determine whether each syndrome has a stable course, in other words, predictive validity should be sought.

5. Study design and comparison groups: In chapter 12 (section 3) six methodological issues were discussed, and it was recommended that attention be paid to all six in future research. Four of these methodological issues have already been referred to in the present chapter. The remaining two are study design and comparison groups. The further study of unexplained physical symptoms, along with many other topics of medical research, would benefit from longitudinal study designs. Longitudinal studies can shed light on the causal nature of associations between variables. In view of the apparent low community prevalence of chronic states of unexplained physical symptoms, it is difficult to conceive of a study design in which assessment would commence in the pre-symptomatic stage. A compromise could be a longitudinal study which commences as soon as possible after symptom onset. Any contamination of measures and ratings from the effects of symptoms would then be kept to a minimum. On the other hand, it was observed in my study that symptoms of very short duration tend to remit, so much wasted effort could be expended if all referrals were commenced in the longitudinal study, regardless of symptom duration. The optimal symptom duration to use as a selection criterion is uncertain, and could be the subject of pilot study, but I would predict that this lies between 3 and 9

months.

Such a study design would also supply one useful comparison group, that is, patients with unexplained physical symptoms which remit after a few months. Other useful comparison groups which could be used in this research are patients with chronic organic physical symptoms, patients with physical symptoms produced by psychiatric illness, and a normal population group. Careful matching should be sought, and for the symptomatic comparison groups, this should include matching for physical symptom severity.

In summary, I am proposing that, out of all the patients included in a descriptive study, a subsample should be selected based on symptom duration, and should enter a longitudinal study.

6. Exclusion of organic disease: I would encourage and support further research, which would require to be conducted within physical medicine, into improved methods of differentiating physical symptoms of organic and non-organic origins, a recommendation which has been made elsewhere (Reuben, 1984). If successful, the results of this research could be applied to the sort of descriptive studies outlined in recommendation 2.

7. Unexplained physical symptoms and psychiatric illness: I would recommend that further research is undertaken to investigate the relationships between

unexplained physical symptoms and psychiatric illness, and in particular, between unexplained physical symptoms, panic disorder, and depressive illness. This research could adopt some of the study designs already proposed. Thus, the attempts to create valid clinical syndromes from clinical data could point to the existence of 'masked' or 'atypical' forms of panic disorder or depressive illness, which might then be acceptable as psychiatric explanations for symptoms. The longitudinal study described in recommendation 5 could shed some light on causal connections, because the possible causative role of psychiatric illness should be easier to evaluate early in symptom course rather than later. Psychiatric morbidity may not be present at the first examination but develop during later months, which would point to an effect of physical symptoms rather than cause.

This research design should also permit the assessment of the role of acute symptom onset in perpetuating symptoms, for example, via adjustment disorder.

This psychiatric research should incorporate all available means of achieving diagnostic reliability. For example, suspected panic disorder-like syndromes could be subjected to tests such as lactate provocation (Liebowitz et al. 1985), along with assessments for the presence of hyperventilation (Lum, 1981; Bass & Gardner, 1985). It has been proposed that background autonomic arousal is an important predisposing cause of panic disorder (Liebowitz et al. 1985) - this could be assessed by

psychophysiological methods, such as skin conductance, along possibly with methods such as self-report diaries. For depressive illness, methods such as the dexamethasone suppression test and R.E.M. latency (Blumer et al. 1982) could be adopted.

8. Pathological mechanisms and aetiology: Should valid clinical syndromes emerge from a descriptive clinical study, then investigations into aetiology and pathological mechanisms could commence. All aetiologies and mechanisms outlined in chapters 7 and 8 could be considered, although reliable methods of measurement have still to be developed for several, for example, pain perception, neurophysiological attention, and 'alexithymia'. This research should ideally take place early in symptom course, before possible contaminating effects of a chronic picture develop.

9. Iatrogenicity: One aetiology which should be studied is the possible iatrogenic effect, concerning symptom perpetuation, of hospital attendance. Thus, the speed at which relevant investigations are completed, the adequacy of reassurance, and indications for follow-up, could all be studied.

10. Treatment: Should valid clinical syndromes emerge following future research, then treatment trials could be instituted on a firmer base. These treatment trials could be empirical or could be based on any provisional data concerning pathological mechanisms and aetiology.

11. Consultation behaviour: I would recommend further research, based in general practice, on the consultation pattern which I have termed the 'fluctuator' consultation pattern, which consists of frequent medical visits with varied physical complaints which are often not explicable. This research should firstly describe the phenomenon in more detail and attempt to develop a reliable method of quantification. Investigations into prevalence, pathological mechanisms, and aetiology could follow. Investigations could also take place into the relationships between this consultation pattern and (i) somatisation disorder, (ii) the disorders consisting of unexplained physical symptoms seen among hospital referrals, and (iii) chronic unexplained physical symptoms of at least 6 months duration.

Consultation-Liaison Psychiatry

The research recommended above is fairly ambitious. One potential stumbling block is the need for close collaboration between specialists in physical medicine and psychiatrists. This might be facilitated if consultation-liaison psychiatry continues to develop. Liaison psychiatry is concerned with psychiatric disorders found at the general hospital, that is, in patients with co-existing physical morbidity. This branch of psychiatry has become well-developed in the U.S.A. (see Lipowski, 1974 and 1982; Hackett, 1977; Fogel, 1983/84; Mitchell & Thompson, 1985), but its

advance in the U.K. has been slow (Lloyd, 1980). Nevertheless, an increasing number of publications from U.K. liaison psychiatry departments is emerging (Thomas, 1983 and 1985). It is apparent that a substantial proportion of the work of the liaison psychiatrist concerns medically unexplained physical symptoms (Thomas, 1983). The liaison psychiatrist should be in an ideal position to co-ordinate research into these symptoms, thus filling a void which has existed for several years.

Recommendations Concerning Clinical Practice

Firm recommendations concerning clinical practice must await further research. However, I believe that the following can be provisionally made, with the understanding that some of the clinical practice described will already be taking place.

1. Diagnosis of 'unexplained' disorders: Physical specialists and psychiatrists should not be reluctant to describe symptoms as 'unexplained', either wholly unexplained or partially. This action should not be regarded as evidence of diagnostic ignorance, instead it should be regarded as acceptance that much remains to be learned about physical symptom production. Such 'unexplained' clinical states should be regarded as respectable clinical entities, and not be the target of medical suspicion and mistrust.

2. Descriptive clinical information: Special attention should be paid to history recording in patients with 'unexplained' physical symptoms seen at hospital, and this should include the variables used in my clinical investigation. This clinical data could help with prognostication and with devising treatment. The hospital specialist should seek information from GPs about the consultation patterns of patients, in order to discover whether the 'fluctuator' pattern exists.

3. Reassurance and discharge: For patients with 'unexplained' symptoms of short duration, say less than 6 months, especially if seen on the background of a 'fluctuator' consultation pattern, strong consideration should be given to performing important investigations only, giving firm reassurance, and discharging the patient from hospital attendance as soon as possible - even if slight doubt remains concerning possible organic explanation. Attention should be paid to the possible effects on symptom perpetuation of prolonged follow-up.

4. Treatment: Empirical treatments should be considered for selected patients (see chapter 9). For those presenting possible panic disorder syndromes, relaxation therapy and/or antidepressant drug therapy could be considered. For patients with chronic unexplained pain, antidepressant drug therapy, especially drugs which inhibit serotonin reuptake such as

clomipramine and the monoamine oxidase inhibitors, could be tried, as could behaviour therapy or stimulus-produced analgesia, such as acupuncture. For resistant cases, consideration should be given to psychiatric referral. Psychiatrists could observe the benefits of a supportive, empathic doctor-patient relationship, although there is no reason why physical specialists could not do the same.

5. Referrals by general practitioners: GPs, when making hospital referrals for patients with puzzling physical symptoms, should try and clarify whether they are primarily seeking diagnosis/treatment or reassurance. GPs should also provide details of previous psychiatric complaints, along with information concerning consultation behaviour.

6. Management of 'fluctuators': GPs should consider regarding the 'fluctuator' consultation pattern as a disorder worthy of attention in its own right. For example, a patient could be confronted with their consultation record, and the possible underlying reasons explored.

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