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THE ROLE OF COGNITIONS IN DEPRESSION

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ABSTRACT

The relationship between depression and attributions and expectancies concerning current life problems and symptoms was examined in a series of studies in clinical populations, aimed principally at examining aspects of the attributional reformulation of the learned helplessness theory of depression. In an initial study comparing depressed and anxious patients, some evidence was found of an association between depression and internal, global and uncontrollable attributions concerning current life problems. A subsequent study examined the relationship between internality and the components of depression obtained from a factor analysis of the Beck Depression Inventory. Evidence was found of a specific association between personal (vs universal) internal attributions and a component of the BDI, interpreted as reflecting low self esteem. A longitudinal study did not, however, provide evidence of a causal relationship between low self esteem and attributions. Finally depression severity was found, in a separate study, to be associated with pessimism about future change in symptoms, while low self esteem was found to be associated with internal attributions concerning the cause of the main presenting symptom. Patients who presented with diffuse, emotional symptoms, compared with those who presented with more specific, neurotic symptoms, were more depressed and attributed the cause of their symptoms more to internal psychological (compared with medical) causes. It was concluded that though some evidence had been obtained of an association between attributions, expectancies and the components of depression, this could be accounted for by the hypothesis that attributions and expectancies are a cognitive symptom of depression rather than that they cause depression. It is contended that methodological problems do, however, make evidence of a causal relationship difficult to obtain.

CHAPTER I

THE ATTRIBUTIONAL REFORMULATION OF THE LEARNED HELPLESSNESS THEORY OF DEPRESSION

Introduction

There has over the past fifteen years' been considerable interest and research into the psychiatric disorder depression, and particularly cognitive theories of depression. Theories and treatments of depression have in the past been developed from a wide variety of standpoints including the biological (eg Coppen 1967, Whybrow and Mendels, 1969), psychoanalytic (eg Freud, 1917), social (eg Brown and Harris, 1978) and behavioural (eg Ferster, 1973). However during the past decade, cognitive theories and therapies of depression have become increasingly prominent and influential, particularly as developed by Beck and his colleagues (eg Beck, 1967; 1976). Cognitive approaches to depression are based on the assumption that depression is fundamentally a cognitive disorder, that is that the depressives cognitive process and structures have a major causal role in the development and maintenance of depression. This contrasts with other approaches, particularly biological models, which assume that depressive cognitions are simply one feature of the disorder.

Cognitive theories of depression have themselves varied greatly in both content and theoretical background. They have focussed on cognitions at different levels of permanency and accessibility ranging from transient conscious thoughts to basic cognitive structures (see Marzillier, 1980) and have been derived from different theoretical paradigms. For example Rowe's (1978) work is based on a personal construct theory framework while Beck's work developed from a psychodynamic background but was influenced most by his clinical observations. Relatively few cognitive theories have been based on experimental psychology, a major exception to this generalisation being Seligman's (eg 1975) learned helplessness theory of depression. The learned helplessness theory was originally developed to explain findings obtained from research into the learning of conditioned responses in animals. The concept was subsequently applied to human subjects in laboratory experiments and finally to the phenomenon

of clinical depression. However it quickly became apparent that the original learned helplessness theory could not account for both findings in the experimental human learned helplessness literature (eg Klein, Fencil-Morse and Seligman, 1976) nor conceptual and theoretical problems arising from extrapolating the learned helplessness phenomenon in students to clinical depression.

The original learned helplessness theory of depression (Seligman, 1975) had proposed that the perception of non-contingency between actions and outcomes was a sufficient but not necessary condition for the occurrence of depression in humans. The revised theory made a number of significant changes and developments including differentiating among the components of depression (affective, motivational, self-esteem and cognitive) and proposing that attributions play a crucial role in mediating between life events and depression.

THE ATTRIBUTIONAL REFORMULATION

The revised reformulation differs from the original learned helplessness theory in several important ways.

1. The kinds of outcome which can lead to depression are defined in a more restricted way. In the original theory non-contingent positive and negative outcomes could produce depression. The revised theory, taking account of "common sense" and clinical experience, proposes that only when highly desired outcomes are believed improbable or highly aversive outcomes believed probable, can depression result. As in the original theory, it is not the expectation alone which can lead to depression, but the expectation together with the expectation that no behaviour within their repertoire will change this likelihood.
2. The revised theory proposes that after the person has failed in their attempts to modify the aversive expectation, leading to a perception of non-contingency, attributions for the cause of this failure are made. These attributions determine whether an expectation of future non-contingency is made and also determine aspects of the resulting depression. If the attribution is to a stable cause, an expectation of non-contingency will usually be made. In addition the depressive changes will be more persistent if more stable attributions are made. The internality dimension will determine whether self-esteem deficits are

found while globality will determine how generalised and severe are the depressive changes.

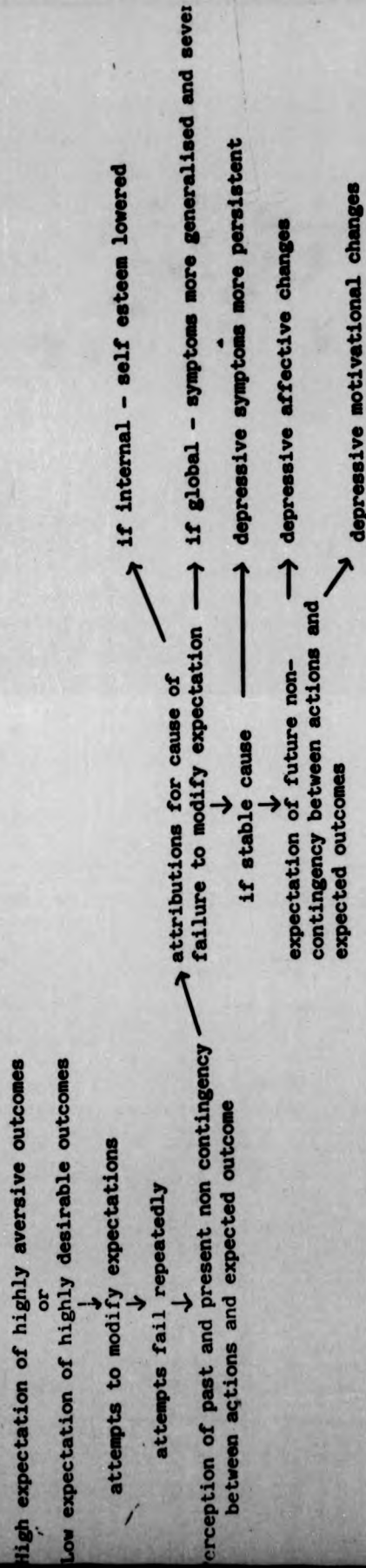
This sequence of events is reproduced in figure 1.

3. Finally, the revised theory proposes that the intensity of depression will depend on the certainty of the expectation of non-contingency, and in the case of the effective and self-esteem defects, the importance of the outcome.

A number of important features of the theory should be noted as they appear to have often been ignored by subsequent authors:

1. The proximal cause of the affective and motivational components of depression is the future expectation of non-contingency not a current or past perception of non-contingency. While future expectations are probably related to past and present perceptions, they are certainly not the same and indeed may be unrelated. For example, a person may be made unemployed because their firm has closed down (a stable external cause) but expect future employment to depend on effort (internal unstable).
2. The future expectations must concern either improbable highly desirable outcomes or probable highly undesirable outcomes. It is not very clear what kind of outcomes are meant by these statements. Abramson et al (1978), are not very specific about this but give, as an example, a man whose child is dying with leukaemia. Here the highly undesirable outcome is the child's death. Abramson, Garber and Seligman (1980), note this problem and suggest that Klinger's (1975), notion of current concerns may be relevant. This conception is important as it indicates that the outcome need not be an event at all but can be, for example, a "non event", such as the expectancy that the person will not be able to have any children, or a failure to adjust to an event, such as the expectation that the person will never get over a loss.
3. The attributions made concern the cause of helplessness, that is the person's failure to modify the future expectation, not the cause of the problem itself or cause of the future expectation. This important distinction has generally been neglected by subsequent

Figure 1 Attributional Reformulation of the Learned Helplessness Theory of Depression



authors.

4. The use of the concept "internality" is clearly specified by Abramson et al (1978) to refer to a personal-universal dimension. This usage is distinct from that adopted by Heider (1958) which regards internal causes as arising from within the person and external causes as arising from the environment. It also appears to differ from the analysis of Weiner in his many studies of achievement-related situations from an attributional standpoint (eg Weiner, 1974). Although task difficulty and ability appear to differ along an internality dimension similar to that proposed by Abramson et al (1978), luck and effort differ in a way similar to that proposed by Heider.

The reformulated theory leads to a number of predictions about depression in humans:

1. When a highly aversive outcome is expected with a high probability, and the person expects that there is nothing that they can do to change this expectation (ie behaviour and outcome are considered non-contingent), this is a sufficient but not necessary condition for the occurrence of the motivational, affective, and cognitive symptoms of depression.
2. If internal attributions are made for the cause of this non-contingency, this will lead to lowered self-esteem.
3. If stable attributions are made for the cause of this non-contingency, this will lead to the symptoms of depression being more persistent and chronic.
4. If global attributions are made for the cause of this non-contingency, this will be associated with more generalised and more intense symptoms of depression.

These predictions concern the aetiology and persistence of some depressions and the relationships between life events and problems and depression.

Although the aetiological theory is the core of the reformulated theory, proposals are also made regarding vulnerability

(depression-proneness) and recovery from depression.

5. There exists a depression-prone attributional style which consists of a tendency to make internal, stable and global attributions for the cause of failures, particularly failures to control aversive outcomes and external, unstable and specific attributions for success. This attributional style interacts with the actual life problems facing the individual in the determination of what attributions are actually made concerning a particular failure.
6. Finally, recovery from depression will depend on a number of factors. Change in the future expectation is critical and may be brought about by changes in the aversiveness or desirability of the outcome or changes in the probability of the outcome. This in turn can be caused by environmental changes or attributional changes.

It should be borne in mind that predictions five and six are less central to the theory. Indeed the vulnerability hypothesis can be regarded as a separate hypothesis concerning what determines the attributions people make when faced with life events or problems. The aetiological theory would not necessarily be falsified should the vulnerability hypothesis fail to be substantiated since the aetiological theory does not directly concern itself with what determines attributions made, only with the consequences of particular kinds of attributions.

Peterson and Seligman (1984) in their review of investigations relevant to the reformulated helplessness theory of depression concluded that "results to date support the model". This conclusion arose from a review of a variety of studies in both clinical and non clinical population, most of which have addressed the vulnerability hypothesis only. Peterson, Raps and Villanova (1985) in a subsequent attempt to differentiate supporting from non supporting studies concluded that a large sample size, a large number of events concerning which attributions were made and using hypothetical events were associated with positive findings. However this was only true for stable and global attributions and since the three attributional dimensions were highly intercorrelated across studies, their independent effects could not be determined. Their conclusions were therefore considerably more qualified than Peterson and Seligman's. Finally Brewin (1985) concluded from his review of the theory and evidence that there is little evidence to support the vulnerability

and aetiological hypothesis although there is some evidence to support other aspects of the model such as that concerning recovery. There is clearly considerable divergence of opinion regarding the extent to which currently available evidence does support the reformulated learned helplessness theory.

The following review will examine the theoretical problems with the reformulated theory, the practical problems arising from attempts to examine the theory, the actual findings obtained and the relevance of the findings to the reformulated theory.

It will be concluded that the reformulated theory has not been adequately tested, most authors having failed to clearly understand its main propositions. The evidence which has accumulated will be presented and demonstrated to be limited in its relevance, inadequate in aspects of its methodology and only weakly supportive in its findings. It will be argued that despite these conclusions the theory itself remains of considerable interest meriting further investigation.

THEORETICAL PROBLEMS WITH THE REFORMULATED LEARNED HELPLESSNESS THEORY

A number of theoretical criticisms and questions have been raised concerning the reformulated theory (eg Wortman and Dintzer, 1978, Hammen, 1981, Coyne, 1982). Most of these criticisms have concerned the attributional component of the theory which will be considered first.

The reformulated learned helplessness theory differs from the original theory principally in the role ascribed to attributional processes. A number of theoretical problems concerning this attributional component will be examined including the theoretical status of attributions; aspects of the attributional analysis; other possibly relevant attributional dimensions; the subject matter of the attributions and the concept of attributional style.

THE THEORETICAL STATUS OF ATTRIBUTIONS

Abramson et al (1978) in their original statement of the theory were far from clear about the status of attributions in their analysis. Attribution theory is derived from a phenomenological framework, attributions being regarded as aspects of a person's naive psychology.

(Heider, 1958). There has been considerable controversy concerning the theoretical status of attributions in particular and cognitions in general (eg Nisbett and Wilson, 1977). Criticisms have been made of the assumption that people have direct access to their mental cognitive process. Nonetheless in their original analysis, it appeared that Abramson et al were using attributions either in a phenomenological framework or as intervening variables. However Abramson, Garber and Seligman (1980) and Peterson and Seligman (1984) in subsequent papers explicitly state that they regard attributions as hypothetical constructs. This is therefore a quite different usage from that of most, if not all attribution theorists (eg Weiner, 1974, Heider, 1958,) and does have considerable bearing on a number of criticisms which have been made of attribution theory. For example Wortman and Dintzer (1978) noted in their critical review that there has been some debate about whether people do actually make attributions spontaneously and whether these attributions relate to subsequent behaviour. Such criticisms do however lose much of their force if attributions are regarded as hypothetical constructs moderating between two sets of variables. Verbal behaviour, in such a framework, is merely one set of output operations of attributions. The absence of spontaneously given attributions is not crucial to Peterson and Seligman's attributional analysis. However if the attribution concept is used as a hypothetical construct, it would be helpful to specify more clearly and in more detail the input and output operations relating to attributions.

ASPECTS OF THE ATTRIBUTIONAL ANALYSIS

The attributional analysis proposed by Abramson et al has also been criticised for some of the assumptions it makes about how people make attributions. For example Wortman and Dintzer (1978) proposed that people may initially make more than one possible attribution concerning the cause of an outcome and that these alternatives might then be tested out subsequently. The implicit assumption that only one causal attribution may be held by a person at any one time may not, they suggest, be valid. However by using a methodology that forces subjects to give a single exclusive cause, a distortion of peoples "natural" attributional process may be created.

Wortman and Dintzer also point out that attributions may be made at different levels in a kind of heirarchy with quite different conclusions

being drawn at different levels. For example a relationship failure may be attributed to lack of certain personal qualities in the person making the attribution (internal cause) but the lack of personal qualities may themselves be attributed to their upbringing or childhood experiences (external cause). Self esteem loss may then depend on which level of attribution is focussed on or given priority by the person. This may be a more significant criticism, particularly as most studies have focussed on the immediately antecedant attributed cause which may relate less closely to depression and loss of self esteem.

The Concept of Attributional Style

The concept of attributional style is assumed by the vulnerability hypothesis, with little evidence being presented to show that it is a significant contributory factor to the making of any specific attribution (Abramson et al, 1978). It may be that attributions are determined predominantly by situational factors, person by situation interactions or person factors other than attributional style (eg mood state). The reformulated theory also proposes that the depressive attributional style consists of the tendency to make these different attributions, internal, stable and global, to a greater extent than people who are not predisposed to depression. Many of the issues raised by these assumptions are empirical but it is noted here that the assumption that much behaviour is related to relatively stable personal characteristics (traits) has been questioned (eg Mischel, 1977).

These points are not of themselves crucial or even important to the aetiological theory or most other aspects of the reformulated helplessness theory. They are, however, pertinent to the most studied but arguably peripheral aspect of the theory, the vulnerability hypothesis.

The Focus of the Attributions

One aspect of the theory which appears to have given rise to considerable confusion and lack of clarity is the object or focus of the attributions ie about what the attributions are made.

Recall that the reformulated helplessness theory proposes that when a person is faced with an undesirable outcome (or non occurrence of an expected desirable outcome) they will attempt to change or control it. If their attempts are unsuccessful they will eventually conclude that the outcome and their behaviour are non-contingent. They will then make attributions concerning the cause of this non-contingency or failure to control. The focus or subject of the attributions is therefore the person's failure to control or modify an outcome, ie the behaviour-outcome non-contingency. It follows from this that the focus of attributions is not the cause of the outcome itself or any aspect of the outcome.

It is important that, in any test of the theory, the appropriate attributional focus is selected. This has not been done in some studies, such as those of Hammen and her colleagues discussed in more detail below, (eg Gong-Guy and Hammen, 1980; Cochran and Hammen, 1985) in which attributions concerning the cause of life events were examined.

It may however be that other attributional foci are important in the development of depression, including the event itself, the consequences of an event and the emotional effect of an event on a person. Indeed it has more recently been proposed that causal beliefs and expectancies concerning the symptoms of depression themselves may be important in the maintenance if not the aetiology of depression (eg Teasdale, 1985, discussed further in Chapter 7 below). Finally causal beliefs about the future may be as important as beliefs about the past, particularly in view of the critical role of future expectancies (of uncontrollability) in the reformulated theory.

The Concept of Outcome

The final part of this section on theoretical issues concerns the nature of the concept of "outcome". Abramson, Garber and Seligman (1980) briefly consider this point and note the lack of clarity in the concept particularly in the sense of "highly aversive outcomes". They suggest that Klinger's (1975) notion of "current concerns" may be relevant and that depressive affect only arises from the non-occurrence and expected non-occurrence of outcomes which are "in our mind", "in the realm of possibility" or "of present concern". This emphasises that outcomes are not just outside "objective" events but in many cases may be a

discrepancy between an expected state of affairs and an actual state of affairs. Thus while two people may be in identical objective situations, one may be satisfied with the situation, and therefore not face the non-occurrence of a desirable outcome, while the other may not. Examples of this may include being childless, not being able to play sports due to an injury, or not having a close friend. This has considerable bearing, once again, on the subject matter of any attributions made since most studies have concentrated on negative events (eg failure or rejection) whether hypothetical or occurring in real life.

PRACTICAL PROBLEMS IN TESTING THE REFORMULATED THEORY

The examination of the reformulated theory has raised a number of practical problems which can be divided into the populations studied, the conceptualisation and measurement of depression and the measurement of attributions and other relevant cognitions. These will be considered in turn.

POPULATIONS STUDIED

The majority of studies have been conducted with American University students as subjects. There have been relatively few studies with clinically depressed patients and a similar number of studies with specific general population groups eg expectant mothers, unemployed men and teachers.

One limitation of much of the literature relevant to the reformulated helplessness theory is the use of "analogues" of clinical depression, namely mildly depressed students. Typically in such studies, groups of depressed students are identified by the administration of the Beck Depression Inventory with a cut off of around 10. This is considerably below the cut of 14 recommended by Beck to differentiate mildly depressed from non-depressed patients (Beck 1967). Such an approach might however be justified by arguing that depression is a continuous state ranging from mild transient states of depression, which nearly everyone experiences, to severe clinical depressions. Given such an assumption any cut off is essentially arbitrary. But if the cut off is arbitrary correlational statistics are preferable and involve less loss of information.

There is however one additional problem in the use of student analogues. This is that in students depression level, as measured by the Beck Depression Inventory (BDI), has been found to be very unstable. For example Hammen (1980) found a change in average BDI score of 8 points over a two to three week period, such that over half the depressed students at initial assessment were non-depressed at later assessment (using a cut off of 10). Zimmerman (1986) using only a one week test-retest interval found a test-retest reliability coefficient of only 0.64 and also that more than half of the students scoring in the depressed range (with the same cut off), at first testing, fell into the non-depressed range a week later (the BDI forms used concerned "the past week"). These findings indicate that depression in students, identified by a BDI cut off of 10, is very transient or fluctuating. This raises the question of whether such mild depressions in students are comparable with clinical depressions in patients. It also emphasises the importance, in studies utilising mildly depressed students, of measuring depression level and attributions at the same time.

CONCEPTUALISATION AND MEASUREMENT OF DEPRESSION

Although the reformulated helplessness theory is not entirely clear about the kind of depressions it might apply to, it is clearly important to clarify this point if meaningful research on the theory is to be conducted and suitable measuring instruments selected. Three issues will be briefly considered: the conceptualisation of depression in relation to the reformulated theory, the distinction between anxiety and depression and the measurement of depression.

a) Conceptualisation

The reformulated theory makes certain assumptions about depression which lead to tentative conclusions regarding the kinds of depression it might apply to. The most important assumption is that the depressions it is concerned with are reactions to some aspects of the person's circumstances, ie it is a theory of reactive depressions.

Unfortunately this assumption does not greatly assist the identification of a subgroup of depressions which are likely to consist mainly of helpless depressions. This is largely a result of the confused situation regarding the diagnosis of affective

disorders. A number of overlapping distinctions are made none of which clearly identify a relevant subgroup. The endogenous-reactive distinction would at first sight appear to be the most promising since this relates most directly to the role of life events in aetiology. However the distinction is, confusingly, at least partly made on the basis of symptomatology (endogenous type depressions being linked with severe somatic or sometimes psychotic symptoms). There is no reliable means of determining the aetiology of a depression, endogenous disorders being identified on the basis of symptom pattern and the absence of an obvious precipitant, in the judgement of the interviewer. Other methods of determining the endogeneity of depression such as the dexamethasone suppression test have not yet proved reliable and valid (eg Braddock, 1986). Other distinctions such as psychotic-neurotic, primary-secondary and major-minor are much less clearly relevant to the helplessness theory.

b) The Distinction Between Anxiety and Depression

The distinction between anxiety and depression is a controversial area, but one of some importance to the reformulated helplessness theory. The theory is one of depression, and anxiety is one of the most important other emotional state and psychiatric disorder for consideration in examining the specificity of the theory to depression. This is particularly so as there is some controversy regarding how specific the measures of depression are, and to what extent they also measure other neurotic pathology, particularly anxiety (see below).

It is essential to clarify what is meant by depression and anxiety, as the terms are used in two quite different ways. First depression and anxiety can refer to diagnostic categories as in the diagnosis of major depression or anxiety state. There is some disagreement regarding how reliably depressed and anxious patients can be differentiated (eg Roth and Mountjoy, 1982). Secondly depression and anxiety can refer to psychiatric clinical states, which may be viewed as either continuous or not with normal states. Here the issue is to what extent anxiety and depression can be differentiated as distinct

states composed of at least some clearly different components. Most evidence suggests that they can indeed be differentiated (eg Garber, Miller and Abramson, 1980) but that there is some overlap in phenomenology and that they tend to be moderately correlated. It is therefore important, in any attempt to test the reformulated helplessness theory, to ensure that any association between attributions and depression is specific to depression as distinct from anxiety. This is particularly so given both the substantial correlations found between measures of depression and anxiety, and the frequent co-existence of symptoms of anxiety and depression in clinical populations (discussed further in Chapter 4 below).

c) The Measurement of Depression

The measurement of depression has utilised two major methods, psychiatric diagnostic categories, and scales in which depression is conceptualised as a continuously varying state.

The most widely used measure of depression in the reformulated attribution theory literature is the Beck Depression Inventory (BDI). This is a 21 item self administered rating scale covering a wide range of depressive symptomatology including affective (depressed mood, loss of interest, irritability, hopelessness), cognitive (difficulty making decisions, sense of failure, self-accusation, self blame), motivational (social withdrawal, impaired work efficiency) and somatic (early wakening, weight loss, loss of appetite, loss of libido) symptoms. The BDI has been found to be a reliable and valid instrument in psychiatric populations (Beck, Ward, Mendelson, Mock and Erbaugh, 1961). It has been found to be internally consistent and moderately stable over time.

A number of criticisms of the BDI must be taken into account. First the BDI total score is simply the unweighted total of the patient's self-rating of each symptom. It is therefore quite possible to obtain a score indicating, for example, moderate levels of depression, but with depressed mood, hopelessness and loss of interest rated as absent. Secondly, the instructions in the original form require the subject to rate how they are feeling "now" which is meaningless in the case of some items such as weight loss or sleep disturbance, and may in other cases reflect very transient fluctuations in mood. The particular temporal form of the BDI used

may therefore be significant (eg whether the original "now" form is used or a time period eg one week is included in the initial instructions). Thirdly the items making up each individual symptom scale do not always appear to form a unidimensional criterion of severity, frequency or other quantitative attribute. For example item 4, dissatisfaction, includes a frequency statement ("I feel bored most of the time"), a comparative intensity statement ("I don't enjoy things the way I used to") and an unqualified intensity statement ("I am dissatisfied with everything") within the same scale. Similar criticisms can be made of item 5, guilt, item 10 crying and item 11 irritability.

Nonetheless the BDI remains one of the most widely used and best validated self-administered questionnaire which, despite the points noted above, is a generally adequate measure of the severity of depression in clinical populations. There has however recently been some controversy regarding its use to detect "non-clinical" depression in students. The major argument has concerned whether the BDI is a specific measure of depression in student populations or a measure of more general psychopathology.

Golin and Hartz (1979) examining the factor structure of the BDI, and Gotlib (1984) investigating correlations between the BDI and questionnaires measuring other forms of psychopathology both questioned the specificity of the BDI as a measure of depression in students. However subsequent studies by Hill, Kemp-Wheeler and Jones (1986) and Hill, Kemp-Wheeler and Jones (1987) have provided substantial support for the proposition that the BDI is indeed a specific measure of depression in a non-clinically depressed student population.

Studies of clinical populations have typically used some level of diagnostic criterion either instead of, or in addition to, a quantitative questionnaire measure of depression. These have included the Present State Examination (Wing, Cooper and Sartorius 1974), International Classification of Diseases (ICD-9) (WHO, 1978), the Research Diagnostic Criterion (Spitzer, Endicott and Robins 1978) and the Diagnostic and Statistical Manual of the American Psychiatric Association (DSM III) (American Psychiatric Association, 1980). This list itself indicates and reflects the diversity of psychiatric diagnostic criteria currently available which renders the comparison

of studies more difficult. This is further increased by the lack of consensus regarding subgroups of depression referred to above. Thus differences in the findings of studies of clinical populations may reflect differences in diagnostic criterion used but equally, as noted above, it is difficult to identify any of the currently used subcategories of depression with the helpless depression described by Abramson et al (1978).

MEASUREMENT OF ATTRIBUTIONS AND OTHER RELATED COGNITIONS

Studies have measured these variables under two main headings; the measurement of attributional style and the measurement of specific attributions and cognitions. The great majority of studies have utilised the former kind of measure in examinations of the vulnerability hypothesis. Measures in both kinds of studies have included four main methods: questionnaires with hypothetical situations, questionnaires with real life situations, questionnaires with experimental tasks and ratings of spontaneously generated attributions.

a) Questionnaires with Hypothetical Situations

This forms the most widely used approach, the main instrument used being the Attributional Style Questionnaire (ASQ) devised by Seligman, Abramson, Semmel and van Baeyer (1979). This, as its name implies, is designed to measure a disposition to make particular kinds of attributions along three dimensions, internality, globality and stability. In view of its widespread use, and that much of the evidence supporting the reformulated helplessness theory relies on it, the ASQ will be considered in detail.

The ASQ consists of 12 hypothetical situations, half positive and half negative. They are also divided between achievement-related and affiliation-related situations.

Examples include:

"You meet a friend who compliments you on your appearance"

(affiliative-positive)

"You do a project which is highly praised" (achievement-positive)

"You meet a friend who acts hostilely towards you"

(affiliative-negative)

"You cannot get all the work done that others expect of you"

(achievement-negative)

For each situation the subject is asked to vividly imagine the situation, decide what they would believe would be the major cause of the situation if it happened to them, and answer three questions concerning the internality, stability and globality of the cause they have given. Each attributional dimension is rated on a seven point scale anchored by statements at each end. Scores are generated for each attributional dimension for negative and positive situations separately. Composite scores can be derived for positive, negative and all situations. The reliability and validity of this questionnaire have not however been shown to be adequate.

Considering reliability first, studies have been conducted of both the internal consistency and test-retest reliability of the ASQ. Internal consistency as measured by Cronbach's alpha, (Cronbach, 1952) has been found to range from 0.12 to 0.78 for the individual scale with most values lying between 0.40 and 0.70 (Peterson, Semmel, van Baeyer, Abramson, Metalsky and Seligman, 1982; Golin, Sweeney and Shaeffer, 1981; Zauta, Gunther and Charter, 1985; Manly, McMahon, Bradley and Davidson, 1982; Person and Rao, 1985). The internality scale with negative outcomes, in particular, consistently yielded low values for the sub-scales casting doubts on the extent to which the scale measures a consistent disposition to make certain kinds of attributions. In view of this Peterson et al (1982) themselves suggest that only composite scores should be used (internal consistency coefficients of composites ranging from 0.71 to 0.85).

Test-retest correlations have also been found to be modest for a measure purporting to be of a stable trait. The individual subscale reliability ranged from 0.47 to 0.69 while for composites the values are slightly higher, range 0.61 to 0.70 (Peterson et al, 1982; Golin et al, 1981; Zautra et al, 1985).

The face validity and criterion validity of the ASQ have been found to be wanting. The face validity of the ASQ depends on the extent to which its content fits the kind of attributional style described by Seligman et al (1978). It will be recalled that this is the tendency to attribute failures, particularly failures after repeated attempts to control an outcome, to internal, global and stable causes. The situations described in the questionnaire do not, however describe

failures in some instances. For example in some items there is no clear indication of any failure (eg "a friend comes to you with a problem and you do not try to help them"). Even where a failure is cited, this is usually a single specific instance (eg "You give an important talk in front of a group and the audience reacts negatively").

The wording of the questions relating to the internality dimensions is also questionable and may account for the poor internal consistency of this item with negative outcomes. It states "Is the cause of due to something about you or something about other people or circumstances". This is quite ambiguous with regard to the conception of internality proposed in the reformulated theory in which comparison with one's peers plays a central part.

The ability of the ASQ to predict attributions made to problems in real life or in experimental situations has been found to be inconsistent raising doubts about its ecological validity. Indeed very few studies have addressed this issue which is crucial if the ASQ is truly to be regarded as a measure of a predisposition to make particular kinds of attributions. Cutrona (1983) in a study of expectant American women found only weak relations between attributions made concerning the causes of childcare stress, blues symptoms and daily stress with the ASQ. The only significant correlations (at the 5% confidence level) found were between the ASQ and daily stress attributions ($r=0.29$). Miller, Klee and Norman (1982), using a short form of the ASQ, found only limited evidence that the ASQ predicts attributions concerning real life events or experimental failure in a clinical population. The only statistically significant positive correlations were for non-depressed subjects and those were between attribution composite scores of the ASQ and experimental tasks. Zautra, Gunther and Charter (1985) found statistically significant positive correlations between ASQ composite scores and attributional components derived from daily logs (subjects rated daily the causes of the most unpleasant and pleasant events they experienced each day for 14 days) in a student population. They did not however report on individual attributional dimensions. Finally Peterson, Betts and Seligman (1985) found significant correlations between spontaneously given causal attributions concerning recent significant life events and the

ASQ, for internality and composite scores but not stability or globality.

A final point about the scale of the ASQ is that Abramson et al, (1978) assume that the attributional dimensions are independent. However a number of authors have found significant inter-correlations between the individual dimensions. For negative outcomes the four relevant studies reported correlations of 0.0 to 0.18 for stability and internality (two statistically significant), 0.19 to 0.43 (median 0.27) for internality and globality (all statistically significant) and 0.23 to 0.55 (median 0.42) for stability and globality (all statistically significant) (Peterson et al, 1982, Golin et al, 1981, Zautra et al, 1985, Manley, McMahon, Bradley and Davidson, 1982 and Pearson and Rao, 1985). This casts further doubt on the ability of the ASQ to examine the predictions of the reformulated theory which include specific predictions concerning each dimension.

In conclusion there are a number of doubts about the reliability and particularly validity of the ASQ as a measure of an attributional style.

b) Questionnaires with Real Life Situations

A number of studies have used questionnaires to assess attributions but with real life events rather than hypothetical situations as the subject of the attributions (eg Hammen, Krantz and Cochran, 1981; Hammen and Cochran, 1981; Cochran and Hammen, 1985).

The use of real life situations has both advantages and disadvantages compared with hypothetical situations. A major advantage is that the attributions concern more personally meaningful outcomes and are therefore more likely to be relevant to the subject than hypothetical situations. Inevitably the latter may include some situations of little relevance or concern to the subject, particularly non-student subjects. A major disadvantage could be the greater variance in situations introduced by eliciting and using different life situations for each person, which could mask individual differences. This could also reduce the reliability of any measure of attributional style based on real life events. There is little empirical evidence available relevant to this point although Firth

and Brewin (1982) in a very small scale study (of 8 depressed patients) found test-retest correlations over a six week period of 0.23, 0.74 and 0.87 for internal, stable and global attributions respectively. These attributions were made concerning the three most important recent life events and the main symptoms. In addition the events selected were typically recent life events, including a heterogeneous mixture of failures (eg failing an exam), ambiguous events (eg losing a job) and non failures (eg illness in a relative). Hammen and Mayol (1982) have in fact described the variety of life event types elicited and demonstrated that attributions do indeed differ according to event type.

A further criticism is that attributions are elicited concerning the cause of the life event itself not the subject's failure to deal with the life event or its consequences. Thus the relevance of such life event studies to the reformulated theory must be seriously questioned.

Studies with real life events are, in conclusion, promising in their relevance to the subject and therefore in their potential to reflect attributions made in real life. Their relevance to the reformulated helplessness theory, in the form they have been carried out in, is unsatisfactory.

c) Questionnaires with Experimental Tasks

A few studies have examined attributions made following success or failure on experimental tasks involving some kind of problem solving. Success or failure is either manipulated experimentally or allowed to occur naturally. Such an approach attempts to measure attributional style by assessing attributions made in one situation. An advantage compared with both hypothetical situations and real life events is that the subject makes the attributions directly after having faced a real, albeit minor, success or failure. The attributions made may therefore be a more realistic reflection of attributional style, especially compared with hypothetical situations. Further the success or failure is at least objectively similar for all subjects, particularly where the outcome is manipulated, although there may be differences in its perceived importance and meaning. A major disadvantage however is that attributional style is inferred from a

single, rather minor situation, which is likely to give a rather unreliable measure of limited validity.

d) Ratings of Spontaneously Generated Attributions

Ratings of spontaneously generated attributions, particularly concerning recent life events, have been utilised in a few studies (eg Gong-Guy and Hammen, 1980, Peterson, Betts and Seligman, 1985). Such a methodology has been used principally to provide evidence regarding the validity of questionnaire elicited attributions. Spontaneously generated attributions possess the advantage over all other methods that they are more likely to reflect the everyday spontaneous attributional processes of the subjects and are less open to the objection that people do not spontaneously generate attributions in many circumstances in everyday life. Their value does however depend upon the extent to which the subject matter of the attributions is appropriate. However Gong-Guy and Hammen, and Peterson et al both examined attributions concerning recent significant life events (not failures to control) while Peterson, Laborsky and Seligman (1983) examined attributions concerning any undesirable event. None of these studies has been of attributions concerning the cause of the uncontrollability or non contingency of life events or concerns, thus none have provided an adequate test of the reformulated theory of learned helplessness and depression.

In summary, a number of practical issues raised by studies relevant to the reformulated helplessness theory have been considered. These issues have included the use of mildly depressed student "analogues" of clinical depression; problems in the identification of relevant helplessness subgroups of depression; the measurement of depression as a continuous clinical state and the measurement of attributions, particularly attributional style. Particular criticisms have been made of the over reliance on studies of mildly depressed students and the validity and reliability of the principal measures of attributional style, especially the ASQ.

THE FINDINGS OF STUDIES RELEVANT TO THE REFORMULATED LEARNED HELPlessness THEORY

Having considered some of the theoretical and practical issues raised by the studies to be reviewed below, the evidence relevant to each aspect of

the theory will now be examined. It will be argued that most of the available evidence is addressed to the vulnerability hypothesis, if addressed to any clear hypothesis at all, and that the evidence available provides only weak support for this hypothesis. It will also be contended that the vulnerability hypothesis is a rather minor extension of the reformulated theory and not a central prediction as stated by Peterson and Seligman (1984). Finally it will be concluded that all aspects of the theory remain to be adequately tested.

The evidence will be considered according to the methodology. The main categories of studies are cross-sectional studies, prospective studies, longitudinal studies and small scale naturalistic studies.

i) Cross-sectional studies (including cross-sectional results of repeated measures studies)

These are the most frequently reported and have involved the measurement of depression and attributions on one occasion. Groups of non-depressed subjects have been compared with depressed subjects on the attributional measure or correlations between measures of depression and attributions have been obtained. These studies have usually addressed the vulnerability hypothesis. It will be apparent that such a methodology can only establish whether there is an association between the state or level of depression and attributions. Only to the extent that state depression and depression-proneness are correlated can such an association be relevant even to the vulnerability hypothesis. The use of cross-sectional studies to examine the vulnerability hypothesis is therefore questionable and their value for testing the aetiological hypothesis is, of course, very limited.

There are a number of other problems with the use of single occasion studies to examine the vulnerability hypothesis. Such a methodology does not enable the direction of causality in any association between depression and attributions to be determined. Positive findings may therefore equally well be explained by proposing that the ASQ simply measures an aspect of the cognitive distortions characteristic of the depressed state (described by Beck 1967, 1976). Many studies of a variety of relevant cognitions have consistently found that "depressive cognitions" are state dependent and are not evident in recovered depressives or those who subsequently become depressed. For

example Reda, Carpinello, Secchiaroli and Blanco (1985) found that although the Dysfunctional Attitude Scale differentiated depressed and control subjects initially, it failed to differentiate the two groups when readministered after the depressed group had recovered. Miller and Norman (1986) found a similar result for the Cognition Bias Questionnaire. Wilkinson and Blackburn (1981) found no difference between recovered depressives and normal subjects on two measures of cognitive distortion, the Cognitive Response Test and the Cognitive Style Test. Both groups differed significantly from a currently depressed group. A similar result was reported by Fennell and Campbell (1984) using the Cognitions Questionnaire, another measure of cognitive distortion. The only studies finding evidence that such measures are elevated in recovered depressives have used short test-retest intervals raising the possibility that the recovered depressive group was not fully recovered (eg Eaves and Rush, 1982) or showed other evidence of incomplete remission (eg Dobson and Shaw 1986). Secondly as noted by Williams and Rothwell (1985), the vulnerability hypothesis only predicts group differences if subjects have recently faced uncontrollable life events (or current concerns). In the absence of such life events, no relationship between attributional style and depression should be found. Thirdly most studies have presented their results as correlations or relative differences between groups, yet the theory makes specific predictions about the attributions depressive-prone individuals will make. Such individuals are hypothesised to make internal, stable and global attributions in absolute, not relative, terms. Further, the aetiological theory also make specific predictions about the relationship between particular attributions and aspects of depression. Once again, group differences cannot adequately test such hypothesis. Finally a number of studies have reported only composite attributional scores made up of the sum of internal, stable and global attributions. Both the psychological meaning of composites and their statistical justification are questionable.

A composite score is difficult to interpret, or make psychological sense of, as it consists of any combination of scores on the three attributional dimensions. Further the attributional dimensions are assumed to be independent rendering the construction of composites even more questionable (although, as noted above, statistically significant small to moderate intercorrelations have in practice been

found).

The cross sectional studies have been carried out with three main groups of subjects: students, psychiatric patients and specific population groups; and four main kinds of measure: the ASQ, real life events and experimental tasks. These will be considered in turn.

a) Studies Using the ASQ

These studies are the most replicated of the three kinds and therefore could provide the most solid body of evidence from cross-sectional studies. The findings are presented in tables Ii (students), Iii (psychiatric patients) and Iiii (specific groups). Considering the evidence in students first, this is presented as correlations between depression and ASQ because most reports are in this form and any cut off point to identify mildly depressed students would be arbitrary. Inspection of Table Ii reveals that statistically significant correlations between most attributional dimensions and BDI total score have been found but that the values of the correlations are small, with few even accounting for 10% of total variance. This is despite the fact that the attributional dimensions are moderately intercorrelated which might have served to spuriously inflate some correlations.

The evidence in patients presented in table Iii is in the form of group comparisons, except for Pearson and Rao (1985) who only report correlations. Here the selection criteria for both depressed and control groups are variable making direct comparisons difficult. Raps, Peterson, Reinhard, Abramson and Seligman (1982) obtained the strongest evidence of group differences with six out of twelve comparisons significant for the individual dimensions. Their control groups, non-depressed medical in-patients and non-depressed schizophrenic in-patients, were however possibly atypical groups themselves. Hamilton and Abramson (1983) also obtained group differences but only gave results for composite difference scores. These are particularly difficult to interpret as they consist of the positive composite minus negative composite, making the precise nature of group differences even harder to determine. Eaves and Rush (1984) found significant differences between depressed, mainly out-patient, subjects and normal controls on all negative attributional dimensions and composite.

Table II

ASQ Administered on a Single Occasion: Student Populations

Authors	Subjects	Measure of Depression	Correlations (Pearson's rho) between HDI total score and ASQ dimensions						Composites	
			Positive Outcomes			Negative Outcomes			Positive	Negative
			I	S	G	I	S	G		
Seligman, Abramson, Smeel and Van Beejer (1979)	143 American Undergraduates	HDI short form	-0.22**	-0.28**	-0.04	0.41***	0.34***	0.35***	-	-
	306 American Undergraduates	HDI short form	-0.16**	-0.12*	0.02	0.08	0.15**	0.30***	-0.09	0.26***
John, Sweeney and Sheaffer (1981)	360 American Undergraduates	HDI long form	-0.19***	-0.14**	0.02	0.07	0.14**	0.23***	-0.12*	0.22***
	206 American Undergraduates	HDI short form	-0.17**	0.05	0.02	0.10*	0.20**	0.11*	-0.09	0.18**
Lofra, Guenther and Chartier (1985)	180 American Undergraduates	HDI short form	-0.22**	-0.16*	-0.13	0.18**	0.23**	0.16*	-0.20**	0.25**
	178 American Undergraduates	HDI long form	-0.09	-0.05	0.07	0.04	-0.15	0.19*	-0.03	0.19*
Wood, Claborn and Milne (1985)	178 American Undergraduates	HDI long form	-0.03	-0.12	-0.09	0.06	0.13	0.20*	-0.03	0.18*
	134 American Undergraduates	HDI long form	no positive scales administered			ns	0.23*	ns	NR	NR
Yasu, Nezu and Nezu (1986)	134 American Undergraduates	HDI				NR	NR	NR	-0.55**	0.62**

NR not reported * p<0.05 ** p<0.01 *** p<0.001

Table III ASQ Administered on a Single Occasion: Clinical Populations

Authors	Subjects	Criterion/ Measure of Depression	Group differences/correlations for each ASQ dimension reported													
			Positive Outcomes					Negative Outcomes					Composites			
			I	S	G	I	S	G	I	S	G	Positive	Negative			
Epstein, Peterson, Reinhard, Abramson and Seligman (1982)	30 Depressed American In-patients (D) 15 Schizophrenic Non- depressed (SZ) I/P 61 Medical, non- depressed I/P (MC)	Fechner's criterion for primary affective disorder EDI short form: depressed EDI > 8 non depressed EDI < 4	D < MC*	D < MC*	D-MC	D-MC	D > MC*	D > MC*	D > MC*	D > MC*	D < MC*	D > MC*	D > MC*	D < MC*	D < MC*	
Miller, Klee and Norman (1982)	40 Depressed American In-patients (D) 30 non-depressed, non schizophrenic, non psychiatric in- patients (c)	Research Diagnostic Criterion for primary or secondary depression EDI > 17	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	D-C (ASQ short form)	D-C	
Hamilton and Abramson (1983)	20 Depressed American I/P (D), 20 Non depressed psychiatric I/P (NDC) 20 normal controls (NC)	Research Diagnostic Criterion for unipolar depression EDI > 16	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	D < NC D < NC
Ingraves (1985)	50 Depressed British patients (D) 50 Normal non-patient controls (C)	Referred as depressed EDI: depressed > 16	D-C	D-C	D-C	D-C	D-C	D-C	D-C	D-C	D-C	D-C	D-C	D-C	D-C	D-C

Table (Iii) cont'd

Authors	Subjects	Criterion/ Measure of Depression	Group differences/correlations for each ASQ dimension reported													
			Positive Outcomes					Negative Outcomes					Composites			
			I	S	G	I	S	G	S	G	Positive	Negative	Diff			
Peterson and Rao (1985)	49 American psychiatric I/P	EHI T1 (admissions) T2 (discharged) T3 (follow up)	-0.28	-0.55*	0.14	0.56*	-0.04	0.57*	-0.16	0.29	0.44					
Eaves and Rush 1984	31 Depressed American patients (D) (mainly out-patients) 17 normal controls (NC)	Research Diagnostic Criterion for unipolar depression. Hamilton Rating Scale for Depression > 16	NR	NR	NR	D > NC	D > NC	D > NC	D > NC	D > NC	D > NC	D < NC	D > NC	D > NC		
Zimmerman, Coryell, Coventhal and Wilson (1986)	57 psychotic depressed I/P (D) 87 non psychotic depressed I/P (D) 25 Schizophrenics (SZ) 50 non patient controls (NC)	DSM III diagnostic criterion	NR	NR	NR	D > NC D-SZ	D > NC D-SZ	D > NC D-SZ	D > NC D-SZ	D > NC D-SZ	D > NC D-SZ	NR	D > NC D-SZ	D > NC D-SZ		

NR not reported

* p < 0.05

** p < 0.01

Table (1111) ASQ Administered on a Single Occasion: Specific Populations

Authors	Subjects	Criterion/ Measure of Depression	Correlations (Pearson's rho) between EDI total score and ASQ dimensions											
			Positive Outcomes					Negative Outcomes					Composites	
			I	S	G	I	S	G	I	S	G	Positive	Negative	
Manly, McKeon, Bradley and Davidson (1982)	61 pregnant Americans	EDI long form	0.04	-0.09	0.14	0.10	-0.03	0.10	0.09	0.06				
Bothwell and Williams (1983)	20 recently unemployed English men	EDI long form	NA	NA	NA	0.46*	NR (ns)	NR (ns)						
	20 employed English men	EDI long form	NA	NA	NA	0.13	NR (ns)	NR (ns)						
Peterson, Bettes and Seligman (1986)	66 adult volunteers	EDI short form	NR	NR	NR	0.41***	0.42***	0.29*						

* $p < 0.05$
 ** $p < 0.01$
 *** $p < 0.001$

NR not reported
 NA not administered

Zimmerman, Coryell, Corenthal and Wilson (1986) found significant differences between depressed in-patients and "healthy" controls on internality and globality dimensions for negative events, and for negative composites, but unlike Raps et al found no differences between depressed and schizophrenic patients. However although the schizophrenic group were less depressed than the depressed group, they were not selected for having a minimum level of depressive symptoms. The results of other studies were generally negative. The evidence in patients of any differences in ASQ scores between depressed and non depressed subjects is therefore inconsistent despite the much greater range in depression level compared with students.

The relatively weaker findings obtained in patient compared with student populations may, however, at least in part be explained by the content of some of the ASQ items. Thus, for example, the item concerning dating or giving a talk are likely to be relatively irrelevant to subjects who are married or have non academic, "ordinary", jobs, that is the majority of non-students.

Finally studies in non student, non patient populations, presented in table Iiii once again provide inconsistent support for the vulnerability hypothesis. Peterson, Betts and Seligman (1985) obtained the most positive evidence but in a volunteer population derived from a university campus during the summer. The other studies by Manley, McMahon, Bradley and Dandson (1982) and Rothwell and Williams (1983) in specific non student groups found much more limited support. Rothwell and William's study is however interesting as the only one in the whole of the cross sectional literature to compare groups of subjects who have experienced a major life event (redundancy) with those who have not. They obtained the predicted difference for internality but not for globality and stability.

The cross sectional studies, in summary provide moderately consistent evidence of a small but reliable correlation between the ASQ and depression level in students but less consistent evidence in patient and other groups. While these results are relatively modest, their relevance to the vulnerability hypothesis is only indirect. Thus although they are not strongly supportive, neither can they be regarded as very negating.

b) Studies with Real Life Events

The results of these studies are presented in tables Iiv (non clinical populations) and Iv (psychiatric populations). They are much more varied in measures and methods of analysis than in the case of the hypothetical events.

Limited evidence of an association between attributions and depression has been found. Hammen and colleagues have carried out three studies of the relationship between attributions concerning the cause of recent stressful life events in students (Hammen, Krantz and Cochran 1981, Hammen and Cochran 1981, Cochran and Hammen 1985). Hammen et al (1981) and Hammen and Cochran (1981) compared mildly depressed with non depressed students using the BDI to divide their subjects. Significant group differences were found for globality but not for stability or internality when attributions over five most stressful recent life events were compared. Cochran and Hammen (1985) used similar methods, although included only extremely upsetting events, but used a more sophisticated method of analysis, a causal modelling statistical procedure. This allows the independent and direct association of each attributional variable with depression to be determined. Once again only globality was found to be independently associated with depression. One other study, Harvey (1981) has examined attributions concerning significant life events. Group differences between mildly depressed and non depressed students were found for internality only for both positive and negative events. Cutrona (1983) and Zautra, Guenther and Charter (1985) examined attributions concerning day to day life stresses and experiences. Cutrona (1983) in a study of expectant mothers found no relationship between the attributional composite derived from attributions concerning daily stresses and childcare stress, and depression level. A statistically significant relationship was however found for attributions concerning blues symptoms. Zautra et al (1985) did however find significant correlations, for all attributional dimensions, between attributions concerning the cause of the most unpleasant daily experience and depression level.

Finally Peterson, Betts and Seligman (1985) rated elicited causal attributions concerning the two worst events involving themselves that had occurred in the past year. All three attributional

Table Iiv Attributions Concerning Real Life Events: Non Clinical Populations

Authors	Subjects	Depression Measure/ Criterion	Attribution Measure	Findings (Negative events only)	Composite
				I S G	
Harvey (1981)	129 American Students	Depressed: EDI \geq 10 Non Depressed: EDI \leq 5	Attributions concerning 3 important recent life events	D > ND** D=ND NR	NR
Hammen and Cochran (1981)	99 American Students	Depressed: EDI \geq 15 Non Depressed: EDI \leq 9	Attributions concerning 5 most stressful recent life events	D=ND D=ND D > ND***	NR
Hammen, Krantz and Cochran (1981)	315 American Students	Depressed: EDI \geq 9 Non Depressed: EDI \leq 9	Attributions concerning 5 most stressful recent life events	D=ND D=ND D > ND*	NR
Outrana (1983)	85 Pregnant Americans	EDI (long form)	Attributions concerning 3 most stressful childcare related events Attributions concerning blues symptoms experienced Attributions concerning the most upsetting event each day for 14 days	NR NR NR NR NR NR NR NR NR	r=0.07 r=0.26* r=0.25
Cochran and Hammen (1985)	278 American Students	EDI long form and other mood scales	Attributions concerning one and five very upsetting recent life events	NR (ns) NR (ns)	Y=0.22 (using causal modelling statistical procedures)
Zautra, Guenther and Charler (1985)	151 American Students	EDI (long form) Brief Symptoms Inventory	Attributions concerning the most unpleasant experience each day for 14 days	r=0.19* r=0.27* (averaged over two measurement occasions)	r=0.28* 0.27*
Peterson, Bettes and Seligman (1985)	66 Adult American Volunteers	EDI (short form)	Attributions concerning the two worst events involving themselves occurring during the past year	r=0.36** r=0.29*	r=0.33** r=0.39**

* p < 0.05 ** p < 0.01 *** p < 0.001

NR - not reported NS - not statistically significant

Table IV: Attributions Concerning Real Life Events: Clinical Populations

Authors	Subjects	Depression Measure/ Criterion	Attribution Measure	I	S	G	Findings (Negative events only) Composite
Miller, Klee and Norman (1982)	40 Depressed American Psychiatric I/P 30 Non Psychotic Control I/P	Research Diagnostic Criterion for Primary or Secondary Depression	Attributions concerning stressful recent life event	NR	NR	NR	D > C*
Gong-Guy and Hammen (1981)	49 Depressed American Psychiatric O/P 16 Non depressed Psychiatric O/P	BDI Depressed >9 Non depressed <9	Attributions concerning 5 most stressful recent life events	D > C D > C	(all events) D-C D-C D-C	D > C D > C (p=0.06)	NR NR NR
Firth and Brewin (1982)	12 British Depressed O/P 12 Non depressed Medical O/P	BDI Depressed >14 Non depressed <9	Attributions concerning main symptom plus 3 most upsetting recent life events	D-C	D-C	D > C	NR
Cochran and Hammen (1985)	51 Depressed American Psychiatric Patients aged 55 or more	RDC for major depression BDI and other scales	Attributions concerning 2 most upsetting events occurring in the previous year	Y=-0.46*	NR (ns)	Y=-0.46	NR (using causal modelling statistical procedure)

*p < 0.05

NR not reported
O/P out-patients
I/P in-patients

dimensions and the composite correlated with BDI score.

There was therefore some evidence of an association between attributions made concerning real life events and depression, although once again the magnitude of associations was often small (most correlations less than 0.3) and the results inconsistent. Globality was most often found to be significantly related to depression in those non clinical populations, paralleling findings with the ASQ.

Four studies utilising real life events with clinically depressed populations have been reported in the literature (table Iv). The studies varied greatly in methods used and subjects studied. The results were similar but rather more positive than those obtained with student subjects with the most consistent positive findings being for globality. Two studies examined attributions concerning the most stressful recent life event reported by their subjects. Miller, Klee and Norman (1982) found a difference between depressed and non depressed psychiatric in-patients but reported only composite scores. Gong-Guy and Hammen (1980) found significant differences in internality, and almost in globality, between depressed and non depressed psychiatric out-patients despite using a very low BDI total score cut off of 9 to classify patients as depressed. Three other studies examined attributions concerning two (Cochran and Hammen 1985), five (Gong-Guy and Hammen 1980) and three major recent life events (Firth and Brewin 1982, plus also the main presenting symptom). Somewhat surprisingly the number of significant associations found was inversely related to the number of life events over the three studies. Cochran and Hammen (1985) found both internality and globality related to depression while Firth and Brewin (1982) found significant differences for globality only and Gong-Guy and Hammen (1980) found no significant differences. However as these studies vary considerably in subject selection criteria and methods of analysis, this pattern of results may not be related to number of life events.

Overall studies with real rather than hypothetical life events as the subject of attributions have found less evidence of an association between depression and attributions in students, but similar or slightly stronger evidence in clinical populations. This may be at

least in part because students are a relatively homogenous group to which the hypothetical situations of the ASQ have been tailored (eg "You give an important talk in front of a group and the audience reacts negatively"; "You go out on a date and it goes badly"). Such items may be of little relevance to a patient population of widely varying age, occupation and marital status. In a clinical population the relevance of real life events may more than compensate for the increased variance introduced by using real life events. However it must be repeated in this context that the focus of attributions in the theory is the subject's helplessness rather than the life event itself.

Studies Involving Experimental Tasks

A small number of studies have been carried out in which attributions have been obtained following success or failure on an experimental task. Such studies have measured attributional style by obtaining subjects' explanations following success or failure on a single, minor, but real and immediate task.

Four studies have been carried out on student subjects, Sharp and Tennen (1983), Rizley (1978) and Kuiper (1978) (table Ivi). These studies have however varied considerably in how and what attributions were measured, and the tasks used. They were not designed to test the vulnerability hypothesis of the reformulated theory but do provide some relevant evidence. Overall each study found that depressed subjects tended to make more internal attributions for failure than non-depressed subjects. There was some evidence of the reverse following success but here the findings were less consistent. It is interesting to note that the findings for internality following failure were found more consistently in these studies than studies using the ASQ despite only one situation being sampled and the relatively small sample sizes used.

The three studies which have been reported with clinical populations are summarised in the table (Ivii). The results are generally negative with Gotlib and Olsen (1983) and Miller, Klee and Norman (1982) finding no group differences in attributions. Watson and Dyck (1984) did find some evidence of group differences in attributional composite but only under specific conditions namely 20 or 50% success, when attributions were obtained post-task (not during task), selected by the subject (not

Table Ivi: Studies Involving Experimental Tasks: Student Populations

Authors	Subjects	Depression Measure	Attribution Measure	Finding
Kuiper (1978)	30 Depressed American Students 30 Non Depressed American Students	Costello-Comrey Depression Scale administered two weeks prior to experiment	Causal attributions for manipulated success or failure on word association task	Ds made internal attributions for failure and success. NDs made internal attributions for success only
Rizley (1978)	20 Depressed American Students (D) 20 Non Depressed American Students (ND)	BDI Depressed > 12 Non Depressed < 7	Causal attributions for manipulated success/failure on a number predictions task	Ds made more internal attributions for failure than ND Ds rated "ability" a less important cause of success
			Causal attributions for manipulated success/failure interpersonal influence situation	Ds rated internal causes more important for both success and failure
Sharp and Terren (1983)	24 American students divided into depressed and non depressed/anxious groups	BDI Depressed > 11	Causal attributions for failure on a puzzle solving task	Ds made more internal attributions than anxious and non anxious controls

Table IV: Studies Involving Experimental Tasks: Clinical Populations

Authors	Subjects	Depression Measure/ Criterion	Attribution Measure	Finding
Miller, Klee and Norman (1982)	40 Depressed American Psychiatric In-patients 30 Non psychotic Control In-patients	Research diagnostic criterion for primary or secondary depression	Causal attributions following success or failure on a noise escape task	No. group differences were obtained for attributional composite following success or failure
Gotlib and Olson (1983)	19 Depressed American Psychiatric In-patients 12 Non Depressed Psychiatric In-patients 16 Non Depressed Controls	Feighner's diagnostic criterion	Causal attributions following verbal recognition task for nonsense syllable	No group differences were obtained in either internality or stability following success or failure
Watson and Dyck (1984)	21 Depressed American Psychiatric In-Patients 21 Non depressed Psychiatric In-Patients	Diagnosis of primary affective disorder BDI ≥ 14 Non Depressed BDI ≤ 13	Causal attributions regarding manipulated success/failure on a "social empathy test"	Group differences in attributional composite for performance found following 20 and 50% success but not 80% success (post-task, subject selected attributions with subject generated dimension scores only)

spontaneously generated) and the dimensions rated by the subject (not independent raters).

In summary, studies involving experimental tasks have been few in number. Those with student populations have provided rather consistent evidence for depression being associated with more internal attributions following failure but less consistent results regarding attributions following success. Those with clinical populations have been generally negative, perhaps reflecting the difference in relevance of experimental tasks to student and patient populations.

To conclude this review of cross-sectional studies, they provide some, but relatively weak, evidence of an association between depression and attributions. Most if not all of this evidence has concerned attributional style and is therefore relevant to the vulnerability hypothesis only. A few studies have examined attributions concerning the single most stressful recent life event(s) which could be relevant to the aetiological hypothesis, with similar results to the studies of attributional style (eg Gong-Guy and Hammen 1980; Miller, Klee and Norman 1982). However, as pointed out earlier, this failure is not particularly surprising given the problems identified in the measurement of attributions and the fact that all the studies have measured state depression not depression-proneness.

Prospective Studies

Prospective studies allow a more powerful examination of the vulnerability hypothesis than cross-sectional studies. They do however present considerable practical problems in finding a suitable group of subjects prior to the occurrence of a life event and the onset of depression. Attributional style is generally measured in a group where a major life event is known to be very likely, prior to its occurrence. While this is not too difficult once a satisfactory subject group is identified (eg pregnant mothers), it is considerably less easy to ensure that measurement is not affected by either the expectation of the life event or, more significantly, the development of depression. Williams (1985) has suggested that cognitive symptoms may develop before the emotional and other symptoms of depression so that an apparent relationship between attributional style and vulnerability to depression may in fact reflect an association between attributional style and the

early symptoms of depression. Nevertheless, by measuring attributional style at a different point in time to the measurement of depression, the vulnerability hypothesis may be more stringently examined, particularly in contrast to the hypothesis that attributional style is actually a cognitive symptom of depression.

Four studies have been reported involving the measurement of attributional style prior to a significant life event. In three of these, Cutrona (1983), Manly, McMahon, Bradley and Davidson (1982), and O'Hara, Rehm and Campbell (1982), the life event was childbirth, while in Metalsky, Abramson, Seligman, Semmel and Peterson (1982) the event was a low mark in an examination taken by college students. All three studies measured attributional style by the ASQ.

Cutrona (1983) found that the ASQ negative attributional composite, administered eight weeks pre-natally did predict the level of depression, as measured with the BDI, at both two and eight weeks post-natally (correlations obtained were 0.35 and 0.33 respectively). Only women who were non depressed pre-natally, as defined by a BDI score of less than nine, were included in the analysis. Depression level pre-natally in this group of women did not predict depression level post-natally. This result therefore appears to provide strong support for the vulnerability hypothesis. There is however one puzzling aspect of this finding. The ASQ did not predict attributions made to real life stress including childcare stress, blues symptoms and a daily report of upsetting events. While this might be explained by difficulties in the measurement of these attributions, it does somewhat weaken the support provided by this study to the vulnerability hypothesis given that the ASQ is supposed to measure a relatively stable attributional style applied to real life events.

Manly et al (1982) carried out a somewhat similar study. The ASQ and BDI were administered six to seven weeks pre-natally but in this study measures of post-natal depression were administered on the third day post-natally. No relationship was found between pre-natal ASQ and post-natal depression. The difference in results may be due to the timing of post-natal depression measurement. Day three post-natally is the peak time for the occurrence of post-natal "blues", a phenomenon which is probably related to the major hormonal changes occurring at this time. In contrast two and eight weeks post-natally are times when depression is more likely to be related to problems in adjusting to the

stress of a new baby. It should however be noted that Cutrona found that attributions concerning blues symptoms were associated with concurrent depression while attributions concerning child care stress and daily upsetting events were not.

O'Hara, Rehm and Campbell (1982), in the largest scale study of the three concerned with child birth, administered the ASQ and BDI as part of a battery of measures during the second trimester of the mother's pregnancy. Depression level was reassessed using the BDI at an average of 11.7 weeks after birth. In a hierarchical multiple regression analysis it was found that ASQ composite (with four items deleted) was a significant predictor of post-partum depression level ($r=-0.30$). This result is therefore similar to that obtained by Cutrona (1983) and strengthens the explanation offered of Manly et al's negative finding, although the amount of variance in depression accounted for by attributional style was dissapointingly low and comparable to that found in cross-sectional studies of sub-clinical depression.

Finally Metalsky et al (1982) administered the ASQ to college students, prior to taking mid-term exams and eleven days prior to the receipt of the exam results. Change in depression level following the receipt of their results was measured with the Multiple Affect Adjection Check List. As predicted, change in depression level was correlated with the internality and globality scales for negative outcomes in students receiving low grades but not those receiving high grades (correlations 0.34 and 0.32 respectively). However the reverse pattern was obtained for stability. Unfortunately, Metalsky et al did not obtain students' own attributions for their success or failure, so it was not possible to examine whether, as predicted by the theory, ASQ is related to depression via its association with such attributions.

The four prospective studies reviewed have provided some support for the vulnerability hypothesis. Three studies, Cutrona (1983), O'Hara et al (1982) and Metalsky et al (1982) were mainly positive in their findings that attributional style did predict subsequent depression level following a major life event. However, how this relationship is mediated is considerably less clear. In particular there is little evidence that it is mediated by the ability of the measure of attributional style to predict actual attributions made concerning real life events.

Longitudinal Studies

Longitudinal studies involve the measurement of both attributions and depression on more than one occasion. Such studies allow a number of questions to be answered which neither cross-sectional or prospective studies can address. First they can provide some evidence relevant to whether depressive attributional style, as measured by the ASQ and other methods, is a relatively stable trait rather than a state-dependent aspect of cognitive processing. This is particularly so where there is considerable variability in depression level between assessment occasions. Secondly the causal direction of any relationship between attributions and depression may be, to some extent, examined. One statistical model which has been used to examine this is cross-panel correlation analysis (Kenny 1975).

Five relevant longitudinal studies have been reported. Golin, Sweeney and Shaeffer (1981) and Zautra, Guenther and Charter (1985) carried out similar studies involving the administration of the ASQ and measures of depression, to students, on two occasions separated by one month and two weeks respectively. Golin et al analysed their study using a cross-lagged panel correlation analysis. They found significant predicted differences between cross-lagged correlations between depression level and stability, globality and composite attributional scores with bad outcomes. From this they concluded that their results support the reformulated theory and more significantly provide evidence that attributions cause depression, not vice versa. However if ASQ is to be regarded as a measure of a relatively stable trait, which all other authors including its originators propose, this conclusion is not warranted. Consider what Golin et al found: namely that correlations between ASQ measured at time two and depression level measured at time one are smaller than correlations between ASQ measured at time one and depression level as measured at time two (cross-lagged correlations). The vulnerability hypothesis would however predict no difference in the magnitude of correlations unless there were either differences in the mean and variance of depression on the two occasions or a significant life event intervened between time one and time two, at a higher level than before time one. There is no indication in their paper that either of these is true.

Zautra et al (1985) did not report cross-lagged correlations. They found

moderate levels of stability for the ASQ over the two week interval (test-retest correlations range 0.48 to 0.62 for individual dimensions and composites). Thus although the study was longitudinal in its method of data collection it was cross-sectional in its method of analysis and so will not be considered further.

Three studies have reported studies of the ASQ in clinical populations. Hamilton and Abramson (1983) assessed depression and attributional style in depressed and non depressed psychiatric in-patients, initially within seventy-two hours of admission and again within seventy-two hours of discharge, the mean interval being seventeen days. Results are only presented for composite difference scores and clearly support the proposition that the ASQ measures a state dependent variable. The depressed group differed from both psychiatric and normal controls in the expected direction at initial assessment but when this was repeated shortly before discharge, no group differences were found. This study strongly suggests that the ASQ does not measure a stable attributional style but rather an aspect of state depression. Pearson and Rao (1985) also obtained measures of depression and attributional style (ASQ) shortly after admission, at discharge and also seven months after discharge. Interestingly, although they presented their results as correlations rather than mean differences, the pattern of results was similar to Hamilton and Abramson (1983). Significant correlations between ASQ dimensions, internality and globality with negative outcomes, were obtained at admission but not at discharge. This could however be at least in part due to the fall in depression level between admission and discharge although the standard deviations of BDI total score were similar on the two occasions (11.21 and 9.25 respectively) which makes such an explanation unlikely. Pearson and Rao also presented mean scores for depression and attributions at admission and discharge. Both BDI total scores and all attributional dimensions with negative outcomes decreased significantly between admission and discharge. While, in the absence of a control group, this evidence is not as strong as Hamilton and Abramson's, it is clearly compatible with it and also suggests that the ASQ measures a relatively state dependent variable. Eaves and Rush (1984) found precisely the opposite pattern of results to Hamilton and Abramson in their study of depressed psychiatric out-patients. While they also found significant differences between depressed and control subjects initially, these differences persisted when the depressed subjects had been recovered for at least two weeks. Results were

presented for each attributional dimension with negative outcomes as well as negative composite. It is difficult to account for the difference between these two studies. Both used the same criterion to define their patient groups and although Hamilton and Abramson used a patient control group it does not seem likely that this could account for the different pattern of results. The only other major difference was in the way the results were reported, Hamilton and Abramson reporting only composite difference scores. However Pearson and Rao, with a mixed psychiatric subject group, did report significant changes between admission and discharge on the negative outcome attributional dimensions.

Finally Firth and Brewin (1982) measured depression level and attributional style on two occasions separated by six weeks in a small scale study of eight depressed patients. They derived their measure of attributional style from attributions made concerning the three most upsetting recent life events their subjects had experienced, and their main symptom. Like Golin et al, they analysed their results using a cross-lagged panel correlation analysis. They found a similar pattern of results as Golin et al for the stability dimension but not internality or globality. The same criticism of their conclusion, that stability is causally related to depression, must be made. However Firth and Brewin's study is rather different in that the subjects were all depressed at time one and less depressed at time two. Their study can therefore be interpreted as providing some support for the proposal of the reformulated theory that the stability of attributions relates to the prolongation of depression.

In conclusion the longitudinal studies reviewed do not provide consistent evidence that attributional style, particularly as measured by the ASQ, is related to depression-proneness. The balance of evidence is at least as compatible with the state dependent hypothesis.

Small Scale Naturalistic Studies

Small scale naturalistic studies can provide some evidence relevant to the reformulated learned helplessness theory, particularly to such issues as whether causal attributions are spontaneously made in everyday life and if so do they reflect a style or are they determined mainly by other factors such as the particular situation?

The only relevant study reported to date is that of Peterson, Luborsky and Seligman (1983). This study concerned a single patient whose mood varied greatly within psychotherapy sessions which were all tape recorded. This allowed an examination of how spontaneous attributions given by the patient changed prior to and following a mood shift. Shifts towards decreased depression were preceded by lower attributional composite scores compared with shifts towards higher depression or no change. This evidence can be adduced in support of the aetiological hypothesis although it is only weakly related to this hypothesis which concerns attributions regarding highly aversive or important outcomes.

The Specificity of Findings

A final point must be made about the specificity of positive findings to depression compared with other emotional states and clinical disorders such as anxiety. The specificity of findings to any particular subgroup of depression should also be considered. Finally it is important to consider whether results are specific to attributional dimension compared with the cognitions proposed by other cognitive theories of depression.

Taking the specificity of findings to depression first, four studies have attempted to examine this, particularly in relation to anxiety. Control groups have typically been non-depressed students or patients, or a mixed group of non-depressed psychiatric patients. Three studies have examined the association between anxiety as well as depression and the ASQ. Dowd, Claiborn and Milne (1985), in a multiple regression analysis found that global attributions for bad outcomes significantly predicted trait anxiety while stable attributions for bad outcomes significantly predicted depression level. No other significant relationships were found. Nezu, Nezu and Nezu (1986) found that the ASQ composites correlated significantly and substantially with BDI total score but also with measures of anxiety (Spielberger's STAI). However since the measures of depression and anxiety intercorrelated substantially (all intercorrelations 0.60) it is difficult to interpret their finding. Hill and Kemp-Wheeler (1986) examined the relationship between the BDI and the EPQ (providing a measure of neuroticism) and a measure of attributional style (applied to failure to prevent life events for which responsibility was perceived). They found that internality and stability were related to neuroticism but not depression in a step-wise regression analysis. It is difficult to draw any firm conclusions from these three studies in

student populations but it emphasises the need to examine the specificity of any associations between depression and attributions.

The specificity of the relationship between depression and attributional style to any subgroup of depressions, particularly reactive or non endogenous depressions has also been examined in two studies. Both Zimmerman, Coryell and Corenthal (1984) and Eaves and Rush (1984) found no difference on any ASQ measure between endogenous and non endogenous depression defined on the basis of symptomatology and the dexamethasone suppression test. There is therefore no evidence linking attributional style to a reactive kind of depression. This is possibly surprising in view of the theory's clear orientation towards reactive depressions although it might at least in part be explained by the problems in making reliable diagnosis or judgment concerning aetiology.

The specificity of positive findings to the attributional dimensions of internality, globality and stability is important in view of the number of other cognitive theories of depression which propose that other cognitions may play a causal role in the aetiology and maintenance of depressions (eg Beck, 1976; Ellis, 1962, 1987). As discussed earlier (pages 23-34), these theories have led to the development of a number of measures of cognitive distortion which include both causal attributions and other cognitive processes. Most studies of such measures have found that depressed subjects show evidence of cognitive distortions while depressed but not after they have recovered (see page 24 above). Cognitions studied have included self blame, ascriptions of responsibility for negative events and expectations that unpleasant events will extend into the future (eg the Cognitions Questionnaire, Fennell and Campbell, 1984), derived from Beck's cognition theory of depressions (Beck, 1976). It is therefore important to demonstrate that the attributional dimensions proposed by Abramson et al (1978) are the most important ones in mediating between life problems and aspects of depression, rather than being simply three of a set of dimensions concerning, for example, the cognitive trend of a negative attitude to the self, the future and the world.

SUMMARY AND OVERVIEW OF THE LITERATURE

The review of the reformulated learned helplessness theory of depression, presented in Chapter I, has revealed a number of limitations in the evidence, which has to date accumulated, relevant to the aetiological hypothesis. Although much of the evidence only weakly, if at all, supports the theory, it may be premature to consider the theory itself to be false at this stage.

The limitations of the evidence reviewed above may be summarised as follows:

1 Subject Population:

The majority of studies have been of "subclinical" depression, in particular of mildly depressed students. The relevance of such studies to a theory of clinical depression is inevitably limited.

2 The Measurement of Attributional Style:

The measures of attributional style used in most studies have a number of weaknesses. Most have consisted of hypothetical situations of little relevance to the aetiological hypothesis of the reformulated theory. Where real life problems have been utilised, attributions have been obtained concerning the cause of single life events not of the uncontrollability of current concerns as specified in the theory. This last point is probably the single most important criticism to be made of the research on learned helplessness and depression.

3 Control Groups Utilised:

Even where clinically depressed populations have been studied, control for psychiatric disorders other than depression has usually been absent or limited. In particular no study has controlled for clinical anxiety which frequently co-exists with and covaries with depression. The specificity of the theory to depression has therefore not been adequately tested.

4 The Lack of Clarity Regarding What Hypothesis is Being Tested:

A considerable number of studies do not make it clear whether they are attempting to examine the vulnerability hypothesis, the aetiological hypothesis or some other hypothesis. Frequently studies have utilised measures of attributional style (eg ASQ) but compared currently depressed and non-depressed groups, a procedure of limited relevance to the vulnerability hypothesis, as it fails to differentially test the state dependent hypothesis.

5 The Paucity of Studies Attempting to Examine other Aspects of the Reformulated Theory other than the Vulnerability Hypothesis:

Despite Peterson and Seligman's (1984) claim that the vulnerability hypothesis is a central aspect of the theory, the original theory as proposed by Abramson et al (1978) clearly regards this aspect of the theory as of secondary importance. There has however been a paucity of studies attempting to examine other aspects of the theory, particularly the aetiological hypothesis.

6 The Specific Relevance of the Attributional Dimensions of Internality, Stability and Globality to Depression:

Many workers have proposed that a variety of cognitions, both attributional and non-attributional, have a central role in the aetiology and maintenance of depression (eg Beck 1976). There have been few attempts to demonstrate that the attributional dimensions proposed by the theory are the most important ones and that they are not simply another aspect of the cognitive distortions frequently reported in depression.

There is therefore a need for more adequate studies relevant to the theory, in particular studies of clinically depressed subjects utilising real life, relevant current concerns, adequate control groups particularly for clinical anxiety, and comparing the attributional dimensions proposed in the theory with other possibly relevant cognitions.

THE RELATIONSHIP BETWEEN DEPRESSION, AND ATTRIBUTIONS AND EXPECTATIONS
CONCERNING CURRENT CONCERNS

The aim of the first study described below was to examine whether causal explanations and expectations regarding real life significant current concerns are related to clinical depression. The study involved the administration, to a group of patients with neurotic psychiatric disorders, of a series of interviews: one covering current concerns or life problems facing the subject; one concerning causal explanations and future expectations regarding these current concerns and finally an interview covering psychiatric symptomatology.

The information obtained was used to answer the following sets of questions:

- 1) Questions arising from the Reformulated Learned Helplessness Theory:
 - i) Do depressed patients attribute the causes of their major current concerns to internal, stable and global causes?
 - ii) Do depressed patients give more internal, stable and global attributions than patients with anxiety disorders?
 - iii) Are patients who give internal, stable and global attributions more likely to be depressed than the whole population of patients studied?

Each of these questions concerns an aspect of the reformulated theory and is relevant to the aetiological hypothesis. It cannot of course provide evidence differentiating the aetiological from a state-dependent hypothesis. The study was carried out as an initial step towards the examination of the hypotheses rather than to differentiate between them.

- 2) Questions arising from both the reformulated theory itself and the work of Wortman and Dintzer (1978), Gong-Guy and Hammen (1980) and Firth and Brewin (1982) regarding the importance of controllability:

- i) Do depressed patients attribute the causes of their major current concerns to uncontrollable causes?
 - ii) Do depressed patients give more uncontrollable causes than patients with anxiety disorders?
 - iii) Are patients who give uncontrollable causes more likely to be depressed than the whole population of patients studied?
- 3) Questions arising from the work of Beck (1976) and others proposing that a negative attitude to self, and self blame, are central features of depression:
- i) Do depressed patients attribute the causes of their major current concerns to causes which they hold themselves responsible for?
 - ii) Do depressed patients give more causes, for which they hold themselves responsible than anxious patients?
 - iii) Are patients who give "personally responsible" causes more likely to be depressed than the patient population as a whole?
- 4) Questions arising from work (including the reformulated helplessness theory, Beck, 1976 etc) suggesting that future expectations, particularly pessimistic expectations, are a central feature of depression.
- i) Do depressed patients expect the cause of future change in their current concerns to depend on any of the following: internal, global, stable, uncontrollable and personally responsible causes?
 - ii) Do depressed compared with anxious patients give more of any of the following: internal, global, stable (low expectations), uncontrollable and personally responsible causes for the cause of future change than anxious patients?

The questions given above concern the relationship between the state of clinical depression and causal explanations and expectations concerning major current concerns. As the study is cross-sectional in design it cannot establish whether any causal relationship exists between depression and causal beliefs. It is however an important first step to determine whether an association exists which is specific to the state of depression.

This study will differ in a number of ways from those already reported, and reviewed above, relating to the reformulated learned helplessness theory and other cognitive theories of depression. First the study will be of a clinically depressed sample of psychiatric patients with a control group of non-psychotic psychiatric patients who have some kind of anxiety disorder. In other studies of clinical samples controls have usually been either non psychiatric patients, "normal" volunteers or schizophrenics. No study has specifically controlled for clinical anxiety. Secondly the study will involve obtaining causal explanations regarding important real life current concerns. Such causal explanations are of direct relevance to the aetiological hypothesis. Other studies which have utilised real life problems rather than hypothetical events have studied only life events which are of questionable relevance to the reformulated theory. Thirdly, several other possibly relevant attributional dimensions, including controllability and attributions of personal responsibility, are examined alongside internality, globality and stability allowing the reformulated theory to be compared with several other cognitive theories of depression. Future causal expectations will also be obtained allowing a comparison of the role of causal explanations with that of causal expectations. Other studies have focussed on causal explanations only, and in many cases included only internality, globality and stability as dimensions.

Subjects

Forty-five psychiatric patients served as subjects in this study. They were a mixture of in-patients, out-patients and day-patients being treated by psychiatrists and clinical psychologists in North Staffordshire, with an age range of 18 to 65. All had been referred with a non-psychotic psychiatric problem, predominantly depression, anxiety symptoms and phobic anxiety. Patients were excluded if they had a current or previous diagnosis of schizophrenia, manic-depressive

psychosis, anti-social personality disorder, alcoholism, drug abuse or an organic syndrome. Those considered by the responsible psychiatrist or psychologist to be of low intelligence were also excluded. Most patients were receiving chemotherapy and a considerable number were also receiving behavioural psychotherapy.

Materials and Procedure

Each subject was interviewed individually either in an office at a health service facility or alone within their own homes. The interview consisted of three components: a current concerns interview; a causal beliefs interview and part of the Present State Examination (Wing, Cooper and Sartorius 1974). The complete interview took approximately two hours and was completed at one sitting with a short break half way through (after the current concerns interview) if necessary.

The Current Concerns Interview

The Current Concerns Interview is a structured interview specifically constructed for this study. The interview was developed from that utilised by Brown and Harris (1978) in their study of life events and depression in women. It covers all aspects of the subject's current life and elicits from the subject areas of current concern. (See Appendices A and B)

Most other studies involving real life problems have focused on life events using some kind of life events survey to elicit these (eg Gong-Guy and Hammen 1980).

As has already been discussed life events are not the most relevant or appropriate aspect of real life problems to study in the context of the reformulated helplessness theory. Abramson et al (1978) have themselves proposed that the concept of current concerns (Klinger 1975) might be more helpful. They have in addition pointed out that the causes of depression can include the loss of desirable outcomes as well as undesirable outcomes. The interview was therefore designed with these points in mind, that is to elicit current concerns which could include the consequences of undesirable events and the non-occurrence or loss of desirable events or outcomes.

The reliability of the interview could not be established by conventional inter-rater reliability measures as only one interviewer was involved in the study. However a number of features and stages were built into the interview to maximise the likelihood that the interview would be reliable. These include:

- 1) The use of an interviewee copy of the schedule (appendix B) which the subject read as the interviewer went through the full schedule;
- 2) A detailed section clarifying each concern with the subject including criteria for arriving at the precise wording of each current concern to be used in the subsequent causal beliefs interview and a procedure for checking the accuracy of the wording with the subject.

As can be seen from an inspection of the schedule, the current concerns interview has three distinct phases:

- 1) An eliciting phase during which each main area of the patient's life was addressed and possible concerns identified;
- 2) A clarification phase during which each possible concern was discussed. Each concern was then written on a 5" x 3" index card in the form:
Present: eg I am not working
Desired: eg I am working in a full-time job
Each card was then placed in front of the subject to check their satisfaction with the wording and to establish that only separate distinct concerns were included.
- 3) A ranking phase completed the interview during which the subject ranked the concerns in order of importance.

The interview therefore normally finished with at least six current concerns, in rank order of importance, each written on an index card in the format described above.

Causal Beliefs Interview (appendix C)

The Causal Beliefs Interview is a detailed structured interview designed to elicit causal explanations concerning each of the six highest ranking current concerns identified by the Current Concerns Interview. For each current concern the subject was asked about their beliefs about the main

cause of the concern, together with further questions concerning a number of attributional dimensions of relevance to the reformulated theory and other dimensions of relevance to other related theories. The dimensions included were:

- 1) Internality - this was asked in two forms, one similar to that used by Seligman et al (1979) in the ASQ. This item did however divide external causes into three subcategories: other people, other circumstances (impersonal world) and physical aspects of the person (impersonal self). The main score, however, indicated the extent to which the person gave internal attributions and was scored as a simple dichotomous item 0=external, 1=internal. The second, labelled universality specifically included a reference to comparison with other people and was therefore directly relevant to the concept of internality as used by Abramson et al (1978).
- 2) Stability - this dimension was also included in two forms, one concerning the probability of change and the other the time scale of change. Each item was rated on a six point scale, each point being defined by a word or phrase.
- 3) Globality - this dimension referred to the extent to which the cause affects other areas of the person's life and was rated by the subject on a five point scale, each point being defined by a word or phrase. These three dimensions were directly derived from the reformulated theory.
- 4) The Behavioural-Characterological distinction - this concerned the internally attributed causes only and referred to the distinction between dispositional aspects of the person (such as lack of ability, shyness) and the person's behaviour, what he or she did.
- 5) Controllability - this referred to the extent to which the cause was believed to be under the person's control, that is contingent on their behaviour. The present controllability of the cause was rated on a five point scale, each point being defined by a word or phrase.
- 6) Responsibility - this dimension was included in two forms, the extent to which the person believed they are responsible for the cause and the extent to which they believed other people were responsible for

causes. Each was ranked on a five point scale.

For each current concern the subject was first asked to describe in their own words what they believe was the main cause of the current concern. Each causal belief scale was then taken in turn and the response of the subject recorded. The subject was then asked about what they believed future improvement in the concern depended upon and what they expected would cause it. Their answer was again recorded and a parallel set of questions concerning this cause asked. The questions were identical to those concerning the cause of the concern except for internality where no question involving peer comparisons was included.

The reliability of the causal beliefs interview was measured by an analysis of the internal consistency of each individual dimension using Cronbach's alpha statistic. For each question an average score was obtained across the six current concerns. It was expected that if the interviews were reliable and measured a consistent aspect of person's causal beliefs (that person variance was a substantial proportion of total variance), values of approximately 0.70 should be obtained. Higher values would indicate greater consistency but, as Boyle (1985) has pointed out, could also point to redundancy between the six concerns.

Present State Examination

The Present State Examination (PSE) is a structured interview designed to cover the main symptoms of psychiatric illness (Wing, Cooper and Sartorius 1974). There is a total of 140 items rated from the interview, detailed criteria being provided for the rating of each item. It has been extensively researched and widely used as a descriptive and diagnostic tool. From the 140 symptoms, 38 syndromes have been derived, each of which consist of groups of similar symptoms. For example, syndrome 6, simple depression, is derived from five symptoms: inefficient thinking, depressed mood, hopelessness, suicidal plans or acts and depression on examination. These 38 syndromes are reduced to a smaller number of diagnostic categories called category classes, for example simple depression and anxiety neurosis.

For the purpose of this study, items were selected from the PSE to cover the full range of neurotic, non-psychotic, symptomatology. Items concerning delusions, hallucinations and thought disorder were excluded

as were items which do not relate to the category classes, such as those concerning "insight". This reduced the number of items to 48, and these are given in appendix D.

The reliability of the interview has been established as high in trained interviewers (Wing et al, 1974). The interviewer in this current study was not specifically trained on the PSE but was an experienced clinical psychologist who had worked full-time for four years entirely with patients of the kind taking part in the research. Detailed scoring criteria are given in Wing et al (1974) for each item and were strictly adhered to. It is therefore likely that the interview was carried out reliably but this could not be directly tested. Six category classes were utilised in this study: simple depression, neurotic depression, retarded depression, phobic anxiety neurosis, anxiety neurosis and other neurosis. It should be noted that these are not diagnoses as such but simply describe by a single category, the main current symptomatology of the subject.

The Present State Examination was used in two ways in this study. First the category class was used to divide the patients into currently depressed and currently non-depressed groups. One feature of the PSE should be noted here.

Where anxiety and depression are both rated as present at the syndrome level, the syndrome rated at the higher level of severity determines the category class. However if both are rated at the same level, depression takes precedence in determining the category class given. Thus subjects with a category class of depression can have anxiety symptoms of severity comparable with those with a category class of anxiety. Subjects with a category class of anxiety cannot have symptoms of depression rated at a comparable level but can have such symptoms at a less severe level.

The PSE was also used to derive a number of symptoms scores: total symptoms reported, number of symptoms of depression and number of symptoms of anxiety. Symptoms of depression included in this total were based on those described by Beck (1967, 1976) and in DSM III (1980): depressed mood, hopelessness, suicidal plans or acts, loss of interest, irritability, loss of weight, early wakening, subjective anergia and retardation, guilt, self depreciation, lack of self confidence, subjectively inefficient thinking (difficulty making decisions), poor

concentration, neglect due to brooding, social withdrawal and loss of libido. Symptoms of anxiety included were: tension pains, muscular tension, subjective feeling of nervous tension, free floating autonomic anxiety, anxious foreboding, panic attacks, situational autonomic anxiety, autonomic anxiety on meeting people, specific phobias and avoidance of anxiety provoking situations.

Overview of Data Analysis

The main body of the data analysis will consist of an examination of each of the main hypotheses (1-4), taking each of the three questions in turn concerning the causal explanations and expectations given by the depressed patients; a comparison between the depressed and non-depressed patients and finally an examination of the relationship between causal beliefs and depression.

- i) Subject Grouping: The main subject grouping was by main category. This procedure gave a group of depressed patients and a group of non depressed, anxious patients. This is discussed further under subject characteristics below.

- ii) Measure of Causal Explanations and Expectations: For each dimension two methods of describing the results were used. First the average score over the six highest ranking current concerns was obtained for each subject. The properties of this averaged score and their inter-relationships are discussed further under "Causal Beliefs Interview" below. This score was used in two ways. First the mean of scores on each dimension of each subject was calculated for each group. This mean score is therefore similar in derivation to the scores utilised in other studies, for example utilising the ASQ. Secondly the score of each subject was categorised for each dimension (eg as either internal or external) and the distribution of frequencies of each category for each group of subjects was obtained. This second method while involving the loss of some information gives a clearer picture of the distribution of causal explanations and expectation categories. For example it clarifies the number of subjects giving internal or external attributions. Details of the rationale and scoring criteria for the two methods of describing attributions and expectations are given in appendix E.

iii) Methods of Analysis

- a) Questions concerning the causal expectations and explanations given by depressed patients: The actual attributions (eg internal, stable, global) given by the depressed patients were examined using the frequencies derived from method 2 described above. Tests of statistical significance were carried out using binomial statistics comparing obtained frequencies with the null hypothesis that patients do not have a bias to give any particular kind of attribution.
- b) Questions concerning the relationship between causal explanations and expectations, and depression will be examined by computing the conditional probability of a subject being depressed if they for example, gave internal attributions and comparing this with the overall probability of being depressed. The significance of the difference between these two probabilities was examined by the application of the binomial distribution mean and variance to the overall probability of being depressed (Guilford, 1965 page 123). For the difference to be found to be significant at the 5% level the conditional probability had to differ by a z score of at least 1.96 from the population probability.

Finally it will be recalled the four main questions were as follows:

- 1) Are internal, global and stable attributions concerning the cause of current life concerns associated with depression?
- 2) Are low levels of the controllability of the cause of current concerns associated with depression?
- 3) Are high levels of personal responsibility attributed to the cause of current concerns associated with depression?
- 4) Are future expectations that internal, global, stable (unexpected), uncontrollable or personally responsible causes will be necessary for future change to occur associated with depression?

RESULTS

SUBJECT CHARACTERISTICS

Table 3i gives the characteristics of the subjects divided on the basis of their main category class. As can be seen both depressed and non-depressed groups have an average age of around 40 years. The median duration of psychiatric disorder was non significantly longer in the depressed group, (Mann-Whitney U test: $U=199$, $z=0.63$, $p > 0.1$). Most subjects in both groups were married and attended as out-patients. There was however an unexpected and statistically significant sex difference ($\chi^2=9.42$, $p < 0.01$), the depressed group being predominantly female and the non-depressed group male. This does not follow the normal expected sex distribution of depression and anxiety disorders, both of which are generally found to be commoner in women (eg DSM III 1980). The main category class for each subject is given in table 3ii. The non depressed group consisted predominantly of subjects whose main category class was of phobic anxiety. Although three separate depression classes were obtained by the depressed subjects, the classes were not analysed separately due to the small numbers involved and because the classes did not seem likely to relate to the helplessness theory. The total number of depressive, anxiety and all symptoms for each group is given in table 3ii. As expected the depressed group differed highly significantly from the non depressed group in number of depressive symptoms ($t=11.93$, $p < 0.01$) but also in total symptoms ($t=8.93$, $p < 0.01$). The depressed group therefore appeared to present with more diffuse symptomatology than the non depressed group. Finally there was no significant difference in the number of anxiety symptoms ($t=1.56$, $p > 0.1$).

CURRENT CONCERNS ELICITED

In all but one subject at least six concerns were elicited. In this one exceptional case (a depressed subject) only three concerns were elicited and causal beliefs were averaged over these three concerns.

Table 3i Characteristics of the Sample Divided by Main Catego Classes

	Depressed Subjects	Non-Depressed Subjects
Number	30	15
Age	mean 41.2 years sd 10.27 years	39.80 years 10.61 years
Sex	male 6 female 24	10 5
Marital Status	single 4 married 21 widowed/divorced 5	1 13 1
Patient Status	in-patient 3 day-patient 3 out-patient 24	0 1 14
Duration of Psychiatric Disorder	median 4.0 years range 0.3-29 years	2.5 years 0.7-19 years

Table 3ii Main Catego Class Derived from PSE and Number of Symptoms Reported

Main Catego Class	Depressed Subjects	Non Depressed Subjects
Simple Depression	14	
Neurotic Depression	6	
Retarded Depression	10	12
Phobic Anxiety Neurosis		2
Anxiety Neurosis		1
Other Neurosis		
Number of Depressive Symptoms sd	8.2 2.47	1.6 1.24
Number of Anxiety Symptoms sd	6.1 2.35	5.0 2.17
Total Number of Symptoms sd	20.4 5.0	9.47 3.16

CAUSAL BELIEFS INTERVIEW:

Reliabilites and Relationships Among Attributional Dimensions

For each attributional dimension, an averaged score over the six highest ranking current concerns was obtained.

- a) Internal Consistency: The internal consistency for each dimension was calculated using Cronbach's alpha statistic (Cronbach, 1953). The values are given in brackets in tables 3iii and 3iv. With the exception of present controllability they lay in the range 0.62 to 0.79 with a median of 0.69 for the dimensions relating to the cause of the concern, and 0.68 to 0.84 with a median of 0.72 for those relating to the cause of future change. These are generally moderate values, comparing favourably with the values obtained for the ASQ (a measure of attributional style) and suggest that the subjects had consistent individual differences in their attributions. The low value of 0.39 for present causes controllability could indicate either that the reliability of this particular scale is poor or that most of the variance of ratings of controllability is accountable for by situation variance or the interaction between situations and persons.
- b) Inter-relationships between the attributional dimensions: The inter-correlation between the attributional dimensions, given by Pearson's Product-Moment Correlation, are presented in tables 3iii and 3iv.
- i) Attributions for Present Cause: A number of relatively small but statistically significant correlations were obtained. Internality was correlated with both universality and personal responsibility, both not unexpectedly. The two stability means were highly intercorrelated suggesting that they measure similar beliefs. Overall most correlations were less than 0.4 indicating that with the exception of the stability measures, the dimensions share only a relatively small proportion of common variance.
- ii) Attributions for the Cause of Future Change: The number and magnitude of these correlations was considerably higher than

Table 311: Interrelationships of the Attributional Dimensions:

I Attributions Concerning the Cause of Current Concerns

(Pearson Product-moment Correlations)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1. Internality	(0.62)							
2. Internality (Universality)	0.42**	(0.69)						
3. Stability (likelihood)	0.35*	-0.14	(0.73)					
4. Stability (time scale)	0.30	0.14	0.80***	(0.65)				
5. Globality	0.28	0.20	0.19	0.07	(0.76)			
6. Uncontrollability	-0.20	-0.07	-0.14	0.06	-0.22	(0.39)		
7. Personal Responsibility	0.38*	0.31*	-0.03	0.29	-0.15	0.10	(0.70)	
8. Others Responsibility	-0.21	-0.37*	0.24	-0.04	-0.03	0.12	0.34*	(0.79)

Signs of correlations adjusted such that positive correlations indicate that high scores on one dimension are associated with high scores on the other dimensions. Internal consistency values, computed by Cronbach's α , given in brackets.

* $p < 0.05$
 ** $p < 0.01$
 *** $p < 0.001$

all two-tailed significance levels

Table 3iv: Interrelationships of the Attributional Dimensions:

II Attributions Concerning the Expected Cause of Future Change

(Pearson Product-moment Correlations)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1. Internality (change in self)	(0.75)							
2. Internality (source self)	0.70***	(0.68)						
3. Expectation of Occurrence (likelihood)	0.06	0.01	(0.84)					
4. Expectation of Occurrence (time scale)	-0.23	-0.20	0.12	(0.70)				
5. Globality	0.28	0.37*	0.23	0.33*	(0.74)			
6. Uncontrollability	-0.04	-0.03	0.08	-0.53***	-0.40**	(0.79)		
7. Personal Responsibility	0.46***	0.45**	0.52***	-0.22	0.32*	0.04	(0.71)	
8. Others Responsibility	-0.33*	-0.16	-0.08	0.27	0.20	0.29	0.39**	(0.69)

Signs of correlations adjusted such that positive correlations indicate that high scores on one dimension are associated with high scores on the other dimensions. Internal consistency values, computed by Cronbach's α , given in brackets.

* $p < 0.05$

** $p < 0.01$

*** $p < 0.001$

all two-tailed significance levels

for the cause of the concerns. The two internality dimensions were highly intercorrelated and may not have been clearly differentiated by subjects. Personal responsibility was again correlated with internality. However, rather surprisingly the two expectation dimensions were uncorrelated indicating that subjects' beliefs about the likelihood of change occurring are independent of their beliefs about the time scale of any change. The considerable number of statistically significant intercorrelations does raise some doubt regarding the independence of the dimensions relating to future change.

- iii) Correlations Between the Dimensions Relating to Present Cause and Expected Cause of Future Change: These are presented in table 3v for similar past and future dimensions only. Most were statistically significantly correlated with globality and internality both quite highly correlated. Subjects who believed their concerns were caused by internal causes also tended to believe future change depended on an internal cause (ie a change in or action by themselves). Similarly those who believed their concerns were caused by global factors also expected future change to depend on such factors. There was therefore some evidence to support the assumption that causal beliefs about the past and about future change are related. Smaller but statistically significant correlations were also obtained for personal responsibility and stability (both forms) but not for controllability or others responsibility.

CAUSAL BELIEFS AND DEPRESSION

Sex Differences: In view of the marked sex difference between the two groups an initial analysis was carried out to examine whether sex was a significant factor associated with subjects' attributions. ANOVAS were carried out on the method one data, for each attributional dimension, with sex and groups (depressed and non-depressed) as independent factors. None of the sex main effects or interactions were significant at the 5% level of statistical significance (and only one at the 10% level). It was therefore concluded that sex was not a significant influence on attributions and male and female subjects were pooled in all subsequent analysis.

Table 3v . Interrelationships of the Attributional Dimensions:

III Attributions Concerning the Cause of Current Concerns with Those

Concerning Future Change (Product-moment Correlations)

Internality	- Future Internality (change in self)	0.54***
Stability (likelihood)	- Expectation (likelihood)	0.31*
Stability (time scale)	- Expectation (time scale)	0.39**
Globality	- Future Globality	0.68***
Uncontrollability	- Future Uncontrollability	0.25
Personal Responsibility	- Future Personal Responsibility	0.41**
Others Responsibility	- Future Others Responsibility	0.27

* $p < 0.05$
** $p < 0.01$
*** $p < 0.001$ } two tailed significance levels

QUESTION 1: ATTRIBUTIONS RELATED TO THE REFORMULATED HELPLESSNESS THEORY

Considering first the questions derived from the reformulated learned helplessness theory, above (page 47), these will now be considered in turn.

The reformulated theory is concerned with the internality, globality and stability dimensions. Table 3vi gives the results for these dimensions using each of the two methods described above.

i) Do Depressed Patients Attribute the Causes of Their Current Concerns to Internal, Stable or Global Causes?

The depressed subjects' ratings of each dimension indicate that the main cause of their current concerns was a stable cause but with no consistent tendency to be either global or internal (table 3vi). Thus depressed subjects did not expect the cause to change much in the future but there was considerable variability in the internality, and globality of the cause.

ii) Do Depressed Patients Differ from Anxious Patients in Their Causal Attributions?

The results were generally consistent across the two methods of analysis. For both globality and internality there were non significant trends ($p < 0.1$ but > 0.05) towards the depressed group giving higher levels of internality and globality than the non depressed group. There were no group differences for universality or stability (both likelihood and time scale forms).

iii) Are Patients Who Give Internal, Stable and Global Attributions More Likely to be Depressed Compared with the Total Patient Population?

The results of this analysis are presented in table 3vii. Statistically significant relationships were found between internality and globality, and depression. Non significant trends were also found for universality but no trend at all was found for stability. There was therefore evidence that subjects who attributed their current concerns to internal and global causes were significantly more likely to be depressed than the total subject pool but no such trend was found for stability.

Overall these results provide some support for the hypothesis derived

Table Svi: The Relationship between the Internality, Globality and Stability of Causal Explanations, and Depression (I)

Group Means (method I)

Attributional Dimensions (range in brackets)	Depressed Subjects mean (sd)	Anxious Subjects mean (sd)	Significance of difference between means
Internality (0-1)	0.54 (0.30)	0.38 (0.28)	t = 1.73
Universality (0-1)	0.54 (0.33)	0.44 (0.29)	t = 1.0
Globality (1-5)	2.72 (0.81)	3.30 (1.13)	t = 1.97
Stability (likelihood) (0-5)	2.03 (0.92)	1.86 (1.04)	t = 0.57
Stability (time scale) (0-5)	1.74 (0.63)	1.57 (0.08)	t = 0.45

Subjects Categorised by Averaged Score (method 2)

Attributional Dimensions	Proportion of subjects categorised as high on dimension		Significance of difference of depressed subjects from null hypothesis (0.50)	Significance of difference between groups
	Depressed Ss. (N30)	Anxious Ss (N15)		
Internality	0.467	0.273 (N14)	z=0.316	z=1.22
Internality (Universality)	0.467	0.333 (N12)	z=0.316	z=0.79
Globality	0.500	0.200	z=0	z=1.90
Stability (likelihood)	0.759 (N29)	0.867	z=2.79**	z=0.84
Stability (time-scale)	0.889 (N27)	0.933	z=4.04***	z=0.49

* p < 0.05
 ** p < 0.01 two-tailed significance levels
 *** p < 0.001

Table 3vii: The Relationship Between the Internality, Globality and Stability of Causal Attributions, and Depressions (II)

Subjects categorised by averaged score (method 2)

Attributional Dimensions	Probability of being depressed if high on dimension	Probability of being depressed in total subject population	Significance of Difference'
Internality	0.824	0.682	z=2.02*
Universality	0.824	0.714	z=1.58
Globality	0.833	0.667	z=2.37*
Stability (likelihood)	0.629	0.659	z=-0.410
Stability (time scale)	0.632	0.570	z=0.811

* $p < 0.05$ (two tailed significance level)

' assessed by application of the binomial distribution means and variance to overall probability of being depressed (Guilford, 1965, p 123)

from the aetiological hypothesis of the reformulated helplessness theory at the beginning of the chapter. Both depressed and non depressed subjects gave stable causes suggesting that the theory's proposals with respect to stability are not specific to depression. There was some evidence that depressed subjects gave more global, and to a lesser extent more internal, causes than non-depressed subjects but not that they gave generally global or internal attributions. Finally subjects who gave internal or global attributions, predominantly, were more likely to be categorised as depressed.

QUESTION 2: THE RELATIONSHIP BETWEEN CONTROLLABILITY AND DEPRESSION

The results for the controllability of the cause of current concerns are given in table 3viii.

- i) The depressed subjects in all cases gave low ratings indicating that they perceived themselves as having little or no control over these causes.
- ii) There was a statistically significant difference between the mean controllability ratings of the depressed and anxious patient groups indicating that the depressed group perceived themselves as having less control over the causes of their current concerns than did the anxious subjects. This result was obtained despite 80% of the anxious group also giving an average controllability rating indicating low perceived control.
- iii) No statistically significant relationship between controllability and depression was found. Thus there was no difference between the probability of being depressed if low controllability ratings had been given compared with the overall probability of being categorised as depressed in this patient sample. The failure to find any relationship may however have been due to floor effects since as noted above, both groups gave mainly low controllability ratings.

In summary both depressed and anxious patients perceived themselves as having little control over the causes of their current concerns. The depressed patients did however give lower controllability ratings than the anxious patients in line with predictions.

Table 3viii: The Relationship Between the Controllability of Causal Explanations, and Depression

Group Means (method 1)

	Depressed Subjects mean (SD)	Anxious Subjects mean (SD)	Significance of Difference Between Means
Uncontrollability	1.55 (0.57)	2.10 (0.76)	t = 2.50*

Subjects Categorised by Averaged Score (method 2)

	Depressed Ss (N,30)	Anxious Ss (N15)	Significance of difference of depressed subjects from null hypothesis (0.5)	Significance of difference between groups
Proportion of subjects giving mean uncontrollability rating 1.0 - 2.5	1.0	0.8	z=5.47***	z=2.5*

Bayesian Analysis of Relationship Between Uncontrollability and Depression

	Probability of being depressed if mean uncontrollable rating 1.0 - 2.5	Overall probability of being depressed	Significance of difference ¹
Uncontrollability	0.71	0.667	z=0.62

* p<0.05

¹ - assessed by application of the binomial distribution and variance to overall probability of being depressed (Guilford, 1965, p 123)

QUESTION 3: THE RELATIONSHIP BETWEEN ATTRIBUTIONS OF RESPONSIBILITY AND DEPRESSION

The results obtained for both the extent to which subjects held themselves and other people responsible for the cause of their current concerns, are given in table 3ix.

- i) Contrary to expectations derived from Beck's work depressed subjects did not give high personal responsibility ratings. The group mean score lies between points three and four on the rating scale, equivalent to a rating of between "moderately" and "a little". The ratings for "others responsibility" were similar, the mean being almost identical to that for personal responsibility (2.31 being equivalent to 3.69 on the scale used for personal responsibility). There was therefore no evidence either of high attributions of personal responsibility or of higher attributions of personal responsibility compared with responsibility attributed to others.
- ii) There were no significant differences between depressed and anxious groups on either scale. The only trend was in the opposite direction to that expected with a rather higher proportion of anxious subjects giving high personal responsibility ratings. This trend was not however reflected in the group means.
- iii) There was also no tendency for subjects who gave high personal responsibility ratings to be depressed.

The results for the responsibility scales were negative and contrary to expectations in every respect with no relationship found between attributions of responsibility and depression.

QUESTION 4: THE RELATIONSHIP BETWEEN EXPECTATION OF FUTURE CHANGE AND DEPRESSION

The results for the expected cause of future change are given in tables 3x, 3xi and 3xii.

- 1) Table 3x revealed that depressed subjects did not have generally low expectations of causes of future change occurring. On the contrary moderate or high expectations were generally given.

Table 3ix: The Relationship Between the "Personal Responsibility" and "Other Responsibility" of Causal Explanations, and Depression

Group Means (method 1)

Attributional Dimensions	Depressed Subjects mean (SD)	Anxious Subjects mean (SD)	Significance of Group Difference (t-test)
Personal Responsibility	3.67 (0.97)	3.55 (1.12)	t=0.39
Others Responsibility	2.31 (1.12)	2.17 (1.02)	t=0.42

Subjects Categorized by Averaged Score (method 2)

Attributional Dimension Category	Proportion of subject in each category		Significance of difference of depressed subject from null hypothesis	Significance of difference between groups
	Depressed Subjects	Anxious Subjects		
High Personal Responsibility	0.036	0.20	z=-4.43***	z=-1.86
High Others Responsibility	0.167	0.067	z= 3.16**	z=0.935

* p < 0.05 ** p < 0.01

*** p < 0.001

cont'd

Table 3ix cont'd

Bayesian Analysis of Relationship Between Responsibility and Depression

Attributional Dimension	Probability of being depressed if high on dimension	Overall probability of being depressed	Significance of difference ¹
Personal Responsibility	0.684	0.667	z=0.25
Others Responsibility	0.762	0.667	z=1.36

* p<0.05 ** p<0.01 ***p<0.001.

¹ assessed by application of the binomial distribution means and variance to overall probability of being depressed (Guilford, 1965, p 123)

Table 3x The Relationship Between Future Expectations of the Cause of Change in Current Concerns and Depression

I Comparison of Attributional Categories by Groups (method 2)

Attributional Dimension Category	Proportion of subjects Categorized as High on Each Dimension		Significance of difference of depressed subject from null hypothesis	Significance of difference between groups
	Depressed Subjects	Anxious Subjects		
Internal (involves self)	0.467	0.533	z= 0.370	z=0.417
Internal (arises from self)	0.50	0.40	z= 0	z=0.63
Global	0.467	0.40	z= 0.370	z=0.42
Low Expectation (likelihood)	0.30	0.067	z=-2.19*	z=2.17*
Low Expectation (time scale)	0.50	0.50	z= 0 ns	z=0
Uncontrollable	0.667	0.40	z= 1.83	z=1.71
High Personal Responsibility	0.333	0.533	z=-1.83	z=1.29
High Other Responsibility	0.100	0.133	z= 4.38***	z=0.33

* p < 0.05 ** p < 0.01 *** p < 0.001

Table 3ci. The Relationship Between Future Expectations of the Cause of Change in Current Concerns, and Depression

II Comparison of Group Means (method 1)

Attributional Dimension	Depressed Subjects mean (SD)	Anxious Subjects mean (SD)	Significance of group differences
Internality (involves change in self)	0.59 (0.36)	0.52 (0.29)	t=0.62 ns
Internality (change arises from self)	0.58 (0.27)	0.46 (0.27)	t=1.26 ns
Globality	2.90 (1.14)	3.27 (1.12)	t=1.63 ns
Expectation of Occurrence (likelihood)	2.77 (1.10)	3.41 (0.81)	t=2.0*
Expectation of Occurrence (time scale)	2.56 (1.14)	2.55 (0.31)	t=0.02 ns
Controllability	2.32 (1.45)	2.99 (1.12)	t=1.54 ns
Personal Responsibility for Change	3.23 (1.50)	2.48 (0.82)	t=2.17*
Others Responsibility for Change	2.42 (1.06)	2.28 (1.07)	t=0.42 ns

* p < 0.05

Table 3c*i*

III Bayesian Analysis of Relationship Between Expectations and Depression

Attributional Dimension Category	Probability of being depressed if mean rating high on dimension	Overall probability of being depressed	Significance of difference between probabilities
Internal (involves self)	0.636	0.667	$z = -0.42$
Internal (arises from self)	0.714	0.667	$z = 0.677$
Global	0.70	0.667	$z = 0.477$
Low Expectation (likelihood)	0.90	0.667	$z = 3.34^{***}$
Low Expectation (time scale)	0.682	0.682	$z = 0.22$
Uncontrollable	0.769	0.667	$z = 1.46$
High Personal Responsibility	0.556	0.667	$z = -1.58$
High Other Responsibility	0.60	0.667	$z = -0.95$

* $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

Subjects did however tend to expect future change to depend on uncontrollable causes but not causes for which they believed themselves highly personally responsible (both tests falling short of statistical significance at the 5% level). There were no trends for expected causes of change in present concerns to be either predominantly internal or global.

- ii) Table 3xi shows that significant group differences were found for two dimensions, the expected likelihood of occurrence of the cause of change and personal responsibility of the expected cause of change. Depressed subjects gave lower expectations that the cause of change would occur and held themselves less responsible for the cause of change. No significant differences were found for internality, globality, controllability, the time scale of the cause of expected change and "other responsibility".
- iii) Table 3xii shows only one significant relationship between attributional categories and depression was found. Subjects who had low expectations of the cause of change occurring were more likely to be depressed.

In summary the findings for future expectations were less positive than for the causes of the current concern. Depressed subjects did have lower expectations of the cause of change than the anxious subjects but did not have generally low expectations. Subjects who had low expectations were more likely to be depressed. Depressed subjects also held themselves less responsible for future change than the anxious subjects and did not give high personal responsibility ratings. Results for internality, globality and controllability were generally negative with no significant group differences.

THE REPLICABILITY OF RESULTS WHEN DIFFERENT METHODS OF CLASSIFYING SUBJECTS ARE USED

The results reported above classified subjects into depressed and non-depressed using the main category class. This may not however be the most appropriate way of dividing subjects into depressed and anxious groups, particularly as the latter could contain subjects with some depressive symptoms.

As a first step towards examining this classification, the distribution of depressive symptoms in subjects in both groups were examined. Table 3xiii shows that in practice there was little overlap between the groups weakening the force of the criticism made above of the anxious group. It can be seen however that there is a wide range in number of symptoms of depression with a bimodal shape to the distribution, one peak being at the lower end and another in the middle. The results with method I group means were re-analysed using four different and to some extent arbitrary classification criteria:

- 1) Catego Class (as above)
- 2) A median symptom split:
 - depressed subjects having 7 or more symptoms
 - non-depressed subjects having 6 or less symptoms
- 3) A median split, excluding subjects with 3-5 symptoms:
 - depressed subject having 6 or more symptoms
 - non-depressed subject having 2 or less symptoms
- 4) A more severely depressed group split:
 - depressed subject having 8 or more symptoms
 - non-depressed subject having 2 or less symptoms

In addition correlations between number of symptoms of depression, anxiety and all symptoms, and the attributional dimensions were computed.

Results are given in table 3xiv for the cause of current concerns. Hotellings' T^2 was applied to assess the overall significance of group differences over all attributional dimensions. Individual statistically significant differences are also given. The results generally suggest that groups formed on the basis of number of depressive symptoms do in fact give greater overall differences in the attributional dimensions as indicated by the Hotellings' T^2 . In all analyses controllability significantly differs between the groups and in two analyses group differences in globality were also found. Finally, moderately large statistically significant, positive correlations (Pearson's product-moment correlation) between uncontrollability and number of depressive symptoms and between globality and number of depressive symptoms were found. However a similar magnitude correlation was also found between number of anxiety symptoms and globality. In order to clarify the relationship between depression, anxiety and the

Table 3ciii: Distribution of Depression Symptom

Total Number of Depressive Symptoms	Number of Subjects	Number of Subjects Categorised Depressed by Catego Category	Number of Subjects Categorised Anxious by Catego Category
0	4		4
1	2		2
2	6		6
3	2		2
4	3	2	1
5	1	1	
6	5	5	
7	5	5	
8	5	5	
9	4	4	
10	1	1	
11	4	4	
12	2	2	
13	0	0	
14	1	1	
max 16			

Symptoms included in analysis: depressed mood, loss of interest, irritability, weight loss, early wakening, loss of energy, guilt, self depreciation, lack of self confidence, difficulty thinking and making decisions, poor concentration, self neglect through brooding, social withdrawal, loss of libido, hopelessness, suicidal plans or acts.

Table 3xiv Relationship Between Depression and Attributions
Concerning the Causes of Current Concerns for Four Methods
of Classifying Patients as Depressed (D) and Non-Depressed (ND)

<u>Group Criterion</u>	<u>No of Subjects</u>	<u>Multivariate T^2 Analysis</u>	<u>Group Differences (significant at 5% level - 2 tailed test)</u>
Catego Category	D=27 ND=15	$T^2 = 19.41, p=0.077$	control*
Median Symptom Split (D > 7 symptoms)	D=23 ND=19	$T^2 = 24.06, p=0.03$	control**
Symptom Split (D > 5 symptoms, ND < 3 symptoms)	D=26 ND=12	$T^2 = 28.23, p=0.02$	control*, globality*
Extreme Symptom Split (D > 7 symptoms, ND < 3 symptoms)	D=15 ND=12	$T^2 = 28.56, p=0.045$	control*, globality*

<u>Symptom Variable Entered In Correlation</u>	<u>No of Subjects</u>	<u>Significant Correlations Pearson's Product-moment Correlation (significant at 5% level - 2 tailed test)</u>
Number of Depressive Symptoms	45	Globality 0.41**, control -0.43**
Number of Anxiety Symptoms	45	Globality 0.38*
Total Number of Symptoms	45	Globality 0.35*

Correlation Between Depression, Anxiety and Total Symptoms

	<u>Number of Depressive Symptoms</u>	<u>Number of Anxiety Symptoms</u>
Number of Anxiety Symptoms	0.31*	
Total Number of Symptoms	0.89**	0.53**

- * $p < 0.05$
- ** $p < 0.01$
- *** $p < 0.001$

attributional dimensions, a partial correlation analysis was carried out. When the correlations between anxiety and both globality and controllability were partialled out, the correlations between depression and globality (0.33) and between depression and controllability (0.44) remained significant. However the correlations between anxiety and globality (0.288) fell short of statistical significance when the correlation between depression and globality was partialled out (the correlation between anxiety and controllability remained non significant).

The same analyses were carried out for the causes of future change. Table 3xv shows a similar pattern of results but with less clear evidence of the superiority of the subject groupings formed by splits based on number of depressive symptoms. Indeed in one case, the median split, the Hotellings' T^2 failed to approach statistical significance. There was also less consistency in the statistically significant group differences and correlations found. No dimension was consistently related to group membership although personal responsibility was in four of the five methods, high personal responsibility being associated with depression. Expectation of the cause occurring in the future (likelihood form) gave statistically significant differences in two analyses as did controllability with depressed subjects having lower expectations of the cause occurring in the future and lower expected control. Controllability and personal responsibility correlated significantly with number of depressive but not anxiety symptoms.

Overall the general consistency of results using different criterion for allocating subjects to depressed and non-depressed groups suggests that the findings are likely to be robust for past controllability and future personal responsibility. It also suggests that the results of the analysis based on catego class are unlikely to be greatly different from analyses based on other criteria. There was some suggestion however that dividing subjects on the basis of number of symptoms reported may have given clearer results than using catego class, particularly for the dimensions relating to the cause of the current concern.

ANALYSIS OF CAUSES GIVEN USING A CATEGORICAL SYSTEM FOR EACH CAUSE

Inspection of the causal explanations given by subjects using their own words suggested that they could be adequately described by the four

Table 3xv Relationship Between Depression and Expectations
Concerning the Causes of Future Change
in Current Concerns

<u>Group Criterion</u>	<u>No of Subjects</u>	<u>Multivariate T^2 Analysis</u>	<u>Group Differences (significant at 5% level - 2 tailed test)</u>
Catego Class	D=29 ND=15	$T^2 = 16.51, p=0.079$	expectation (likelihood)* personal personibility*
Median Symptom Split (D>7 symptoms)	D=23 ND=19	$T^2 = 12.04, p=0.3$	personal responsibility*
Symptom Split (D >5 symptoms, ND <3 symptoms)	D=26 ND=12	$T^2 = 19.96, p=0.08$	expectation (likelihood)*
Extreme Symptom Split (D >7 symptoms, ND <3 symptoms)	D=15 ND=12	$T^2 = 25.74, p=0.06$	control** personal responsibility*
<u>Symptom Variable Entered In Correlation</u>	<u>No of Subjects</u>	<u>Significant Correlations Pearson's Product-Moment Correlation (significant at 5% level - 2 tailed test)</u>	
Number of Depressive Symptoms	45	control -0.33* personal responsibility 0.30*	
Number of Anxiety Symptoms	45	globality -0.29*	
Total Number of Symptoms	45	control -0.30 personal responsibility 0.37*	

categories yielded by question (1) internality, but with causes attributed to the personal self divided into behavioural and characterological causes. Each cause given was therefore categorised into one of five categories, based on subject's responses to questions one and three of the Causal Beliefs Interview: characterological, behavioural, physical self, impersonal circumstances and other people. Examples of each cause are given in table 3xvi.

Group means for each of these categories, expressed as a proportion of all causes given, are presented in table 3xvii. For the cause of the current concern, the depressed group gave characterological causes approximately half the time with few behavioural and physical self causes and approximately a one fifth each circumstances and other people. The non depressed subjects gave approximately one third characterological causes and circumstances and around one fifth other people. There was a strong but statistically non significant trend for depressed subjects to give more characterological causes and fewer circumstances as causes. For the cause of future change the results were less distinct. Depressed subjects gave both characterological and behavioural causes about one quarter of the time with both circumstances and other people being utilised equally but less frequently. Non depressed subjects gave behavioural causes most often but circumstances, other people and characterological causes were also involved. No group differences approached statistical significance.

DISCUSSION

The present study has provided further evidence relevant to the reformulated learned helplessness theory and to a number of related and alternative theories of depression. The evidence has been obtained in a clinically depressed patient population examining their causal explanations and expectations regarding their most important current concerns. Taking each set of questions posed at the beginning of this chapter in turn, the evidence may be now summarised.

Table 3xvi Examples of Main Types of Causal Explanation Given by

Subject

Past Cause

Self Characterological	because I am a very emotional person; lack of confidence; shyness; my moods and insecurity; I am a worrier; I am a tense person
Self Behavioural	because I did not change the situation; I lived a lie; I left the job
Self Physical	because of my back complaint; my metabolism - I'm a fast burner; a medical problem
External Circumstances	because of the amount of jobs I have to do at home and work; of all the things that happened all at once; financial situation
External Other People	supervisors bombastic attitude; my son's personality and attitude; husband going out on his own

Future Cause of Change

Self Characterological	stop being a worrier; change my attitude on life; change my personality; I became harder; became a less nervous person
Self Behavioural	go out more; try very hard; try not to be frightened; make the effort to go to another club; going on a diet; learning to relax
Self Physical	a cure for my neck complaint; blood pressure reduced
External Circumstances	change of luck; improvement in economic situation; a house exchange; being moved to a different job
External Other People	my husband being more understanding; my daughter-in-law unwinding; son looking after himself more

Table 3vii Main Cause Given for Each Current Concern

Cause of Concern: Proportion of Each Type of Cause Given by all Subjects in Group

Group	Characterological	Behavioural	Physical	Circumstances	Other People
	mean (SD)	mean (SD)	Self mean (SD)	mean (SD)	mean (SD)
Depressed	0.472 (0.30)	0.0667 (0.120)	0.085 (0.151)	0.180 (0.20)	0.231 (0.274)
Non depressed	0.300 (0.26)	0.0667 (0.105)	0.134 (0.085)	0.311 (0.234)	0.188 (0.197)
Significance of group differences (2-tailed t-test)	t=1.985 p < 0.1	t=0 p > 0.1	t=-0.84 p > 0.1	t=1.96 p < 0.1	t=0.54 p > 0.1

Cause of Future Change: Proportion of Each Type of Cause Given by all Subjects in Group

Group	Characterological	Behavioural	Physical	Circumstances	Other People
	mean (SD)	mean (SD)	Self mean (SD)	mean (SD)	mean (SD)
Depressed	0.267 (0.302)	0.259 (0.307)	0.084 (0.22)	0.149 (0.197)	0.178 (0.251)
Non depressed	0.158 (0.246)	0.345 (0.292)	0.112 (0.23)	0.213 (0.205)	0.153 (0.168)
Significance of group differences (2-tailed t-test)	t=1.296 p > 0.1	t=0.92 p > 0.1	t=0.40 p > 0.1	t=1.01 p > 0.1	t=0.34 p > 0.1

1) The Reformulated Learned Helplessness Theory

The evidence obtained gave some, but not very strong, support to hypotheses derived from the aetiological hypothesis of the reformulated learned helplessness theory. Depressed subjects gave stable but not predominantly internal or global attributions. Depressed subjects tended to give more global and to a lesser extent internal causes than the anxious subjects although these trends were not statistically significant in the main analysis using category class to form depressed and anxious groups. There were no differences between groups for stability. These results indicate how very important it is to use adequate control groups in tests of learned helplessness theory. In the absence of the anxiety group one might have concluded the results supported the learned helplessness theory much more strongly and that they were specific to depression. Finally subjects who gave predominantly internal or global attributions were significantly more likely to be depressed than the whole patient population. This latter more positive finding might be related to the heterogeneity of the depressed patients. It should be recalled that the reformulated helplessness theory is a theory of one type of depression, helpless depressions, not of all kinds of depression and therefore it might be expected that the latter method of analysis would yield more positive results than a simple group comparison. The positive results can be interpreted as either reflecting a kind of cognitive distortion by the depressed patients, perhaps due to a depression-prone or a state dependent attributional style, or that the depressed patients are facing, or are troubled more by, certain kinds of life problems, namely those with internal, global and stable causes. Either possibility is however consistent with the reformulated learned helplessness theory.

2) Attributions of Controllability

Depressed subjects gave predominantly uncontrollable causes and gave more uncontrollable causes than the anxious subjects. No association was found between uncontrollable causes and depression although floor effects could have obscured any association that does exist. The evidence supported quite consistently the hypothesis that depressed

subjects perceive themselves as having little control over the causes of their current concerns and that this is specific to depression, at least in degree, when compared with anxiety. This result provides support for the importance given to uncontrollability in the learned helplessness theory.

3) Attributions of Personal Responsibility

No support was found for a relationship between depression and attributions of personal responsibility. Depressed subjects did not give causes for which they held themselves mainly responsible nor were there any group differences between the depressed and anxious subjects. Depressed subjects did not therefore appear to blame themselves for the causes of their current concerns to any very significant extent. This finding is surprising given that guilt and self blame are such frequent features of depression, and the central role in depression given to a negative self concept or low self esteem by authors such as Beck. It may be that these negative findings are due to a social desirability set, defensiveness or desire for approval and that in consequence subjects' verbal responses may not have accurately reflected their cognitive processes.

4) Expectations of the Cause of Future Change

The findings for expectations of the cause of future change were generally negative. Depressed subjects did not give predominantly internal or global causes, or causes which were unlikely to occur although there was a trend towards them giving uncontrollable causes and causes for which they did not hold themselves responsible. The negative findings for the likelihood of occurrence were rather surprising given the frequently reported association between depression and pessimism about the future. Depressed subjects were however more pessimistic than the anxious group.

The other positive finding, that depressed subjects held themselves less responsible for future change, was the reverse of that expected and reinforces the negative findings for responsibility attributed to past causes.

In summary this study involved the comparison of groups of depressed and

anxious with anxious and non-depressed (largely) patients on measures of causal explanations and expectations regarding major real life current concerns or problems. Results gave some support to the reformulated helplessness theory in that subjects who gave internal or global attributions for the cause of their current concerns were significantly more likely to be depressed than the patient population as a whole. Depressed subjects as a group also tended to give more global and internal (but not in the sense of the personal-universal distinction) attributions. As regards stability depressed subjects gave predominantly stable attributions but so did anxious non-depressed subjects.

Indirect support for the reformulated theory was also given by the results for controllability. While the theory does not discuss controllability as an attributional dimension, the perceived controllability of current concerns is a critical element of the theory. As would be predicted by the theory depressed subjects rated the causes of their current concerns as uncontrollable, and did this to a significantly greater extent than the anxious group.

The results for future expectations of the cause of future change accorded less well with the reformulated theory. Depressed subjects did not give low expectancies for the likely cause of future change as might have been predicted from the reformulated theory although they did give lower expectancies than the anxious group. They did tend to rate the cause of future change as uncontrollable, but did not differ significantly from the anxious group in this respect.

While this study provided some support for the reformulated helplessness theory of depression, little support was found for other theories particularly Beck's cognitive theory. Thus depressed subjects did not appear to be highly self blaming in that they did not tend to hold themselves responsible for the cause of their problems. They did not appear to be particularly pessimistic about the future and did not hold themselves mostly responsible for future change.

THE MEASUREMENT OF DEPRESSION AND ANXIETY

In Chapter 3 the relationship between depression and causal beliefs was examined using a system for categorising subjects on the basis of their main reported symptoms: the Catego category derived from the PSE. This methodology does however have a number of disadvantages when utilised to test the reformulated learned helplessness theory. First the theory differentiates among the components of depression and makes different predictions about these components. In particular internality is linked most closely with the self esteem loss in depression while globality is related to the generality of motivational deficits and stability to the chronicity of these deficits. The use of a mutually exclusive category method to define subject groups does not allow these different components to be differentiated. Secondly, as will be discussed further below, depression and anxiety frequently co-exist in clinical populations. A result of this, as found in Chapter 3, is that it is difficult to find "pure" depressed and "pure" anxious groups of patients.

Indeed in that study there were no differences between the two groups in total number of anxiety symptoms, although they did differ clearly in depressive symptomatology. Although this permitted adequate control of anxiety symptoms, it did not permit the assessment of the independent relationships between depression and causal beliefs and between anxiety and causal beliefs. Thirdly a categorical system takes no account of symptom severity once it is above a threshold level. This may not be a problem if the theory assumes that depression is a discontinuous state or that once above a central threshold the relationship between causal beliefs and depression is a constant one. This does however seem rather unlikely in view of the number of positive findings in students of an association between attributions and depression using "sub-clinical" cut offs to define depressed groups. Further in the study described in Chapter 3 the results obtained by correlating number of depression symptoms with causal beliefs, or by dividing subjects using more extreme symptom splits (ie excluding subjects with moderate number of depressive results) were at least as statistically significant and consistent as those obtained using catego category, and in a number of instances more so.

These considerations lead to the conclusion that the continuous measures of depression and anxiety, and of the sub-components of these states, may enable a more adequate test of the reformulated learned helplessness theory to be carried out than by using a categorical system. However the measurement of depression and anxiety as independent states do raise a number of issues, some of which were discussed in Chapter I. These include both general and specific points:

- i) Can depression and anxiety be measured independently of one another?
- ii) Do measures of depression and anxiety attempt to assess states or traits, and to what extent do they make clear their objective?
- iii) How can the clinical state of anxiety be measured?
- iv) How can the clinical state of depression be measured and to what extent do measures of depression take into account and yield independent measure of the components of depression?

These issues are of considerable importance to studies of the reformulated learned helplessness theory, and other theories of depression. If the specificity of such theories to depression is to be tested, adequate measures of depression and anxiety are essential. As the reformulated theory makes predictions about both state depression and vulnerability to depression, it is important to have measures of state, and to a lesser extent trait, depression and anxiety. Cognitive theories of depression in general, and the reformulated theory in particular propose that cognitions play a causal role in the aetiology and/or maintenance of depression. It is important to know to what extent measures of depression actually measure and reflect the self esteem loss and other cognitive components of depression.

THE MEASUREMENT OF DEPRESSION AND ANXIETY AS INDEPENDENT STATES

The independent measurement of depression and anxiety raises a number of difficulties including the overlap of symptomatology; the simultaneous occurrence of depression and anxiety symptoms in clinical populations and the distinction between depression and anxiety as mood states and depression and anxiety as clinical syndromes.

A mood state may be differentiated from a clinical syndrome in that the former is essentially an affective concept while the latter is an

essentially medical construct in which a number of symptoms are linked together because of their tendency to co-exist and because of presumed basic underlying cause or causes. A syndrome consists however only of symptoms (and signs) unlike a psychiatric diagnosis which takes into account personality variables, aetiological factors and previous psychiatric history.

Although the symptomatology of depression and anxiety are to a considerable extent clearly differentiable there is an area of overlap. Indeed the affects of depression and anxiety themselves have been held to be characteristic of both anxiety and depression (eg Garber, Miller and Abramson, 1980). The Hamilton Rating Scales for Depression and Anxiety (Hamilton 1959, 1967) reflect this, each including items concerning both anxious and depressed mood. Other symptoms such as initial insomnia, irritability and difficulty in concentration can also occur in both depression and anxiety.

Roth and his colleagues in Newcastle conducted a series of studies concerning the differentiation of clinical depression and clinical anxiety (Roth, Gurney, Garside and Kerr, 1972; Gurney, Roth, Garside, Kerr and Schapiro, 1972; Mountjoy and Roth, 1980). Using multivariate methods of analysis they were able to show that a population of anxious, depressed and mixed anxiety-depression patients were unimodally distributed along a factor reflecting the depression-anxiety continuum (as indicated by the pattern of factor loadings). This indicated that such patients do not readily and naturally fall into two distinct groups although the symptoms themselves did distribute themselves at opposite ends of a continuum reflecting the distinction between anxiety and depression. In a later study (Mountjoy and Roth, 1980) they were able to demonstrate, using discriminant function analysis, that it is possible to differentiate patients diagnosed as having either an anxiety disorder or depression. However the overlap of symptomatology was once again apparent with items such as poor concentration positively discriminating the anxious - phobic subjects, despite poor concentration being usually considered a symptom of depression (eg Present State Examination, 1975; DSM III, 1980). By contrast persistent tension was found to positively discriminate subjects diagnosed as depressed.

"Anxiety" and "depression" can refer both to mood states and clinical syndromes. Measures of depression and anxiety may be designed to measure

either of these two kinds of variables which are phenomenologically quite distinct. For example Spielberger's State-Trait Anxiety Inventory (Spielberger, 1970) is basically a measure of mood state and includes no reference to somatic sensations. The Leeds Self Assessment of Anxiety (and Depression) Scale (Snaith, Bridge and Hamilton, 1976) includes somatic symptoms as well as emotional state and was designed to measure the clinical syndrome of anxiety. This distinction is of some importance, particularly as depressed and anxious mood have not been found to be good discriminators of the clinical syndromes of depression and anxiety. For example Snaith, Baugh, Clayden, Husain and Sipple (1982) found a correlation of 0.64 between ratings of depressed mood and ratings of overall severity of clinical anxiety.

It may therefore be concluded that while anxiety and depression, as clinical syndromes, can be differentiated there is a considerable overlap in symptomatology, and frequent occurrence of symptoms of both depression and anxiety in clinical populations.

THE MEASUREMENT OF DEPRESSION AND ANXIETY AS STATES OR TRAITS

Conceptually state and trait depression and anxiety are quite distinct but they are nonetheless not always clearly differentiated. State anxiety and depression refer to the current or recent functioning of the subject and are measured by reference to current symptomatology. Trait anxiety and depression refer to the tendency to become depressed or anxious readily or frequently and are measured by reference to how the subject generally or normally functions. States are usually measured by reference to a time period of a month or less, traits by reference to a long or indefinite time period. Some measures of depression and anxiety may be criticised for lack of clarity in this regard. Thus while some measures eg Spielberger's State-Trait Anxiety Inventory (Spielberger, 1968) and the Beck Depression Inventory (Beck et al, 1961) clearly specify the time period involved, others such as Cattell's IPAT Anxiety Scale (Cattell and Scheier, 1963) do not.

The importance of this distinction can be illustrated with reference to the factor analytic studies of Golin and Hartz (1979) and Weckowicz, Muir and Cropley (1967). Golin and Hartz attempted to examine the similarity of factors obtained from BDIs administered to mildly depressed students (cut off of 9) with those obtained by Weckowicz et al. They found little

similarity and concluded that mild depressions differ qualitatively from severe clinic depressions. This contrasts with the finding of a similar study in mildly depressed students by Hill, Kemp-Wheeler and Jones (1986). In this study the factors obtained in students were reasonably similar to those reported in Weckowicz et al and a sample of depressed patients. The major difference between the two studies was that Golin and Hartz used a trait form of the BDI whilst Hill et al and Weckowicz et al used the state form.

The Measurement of Clinical Anxiety

The measurement of the clinical state of anxiety, as distinct from anxious mood, requires subjects to report on symptoms experienced over a period of time, usually from a few days to a few weeks. This is particularly important in the measurement of the clinical syndromes because the symptoms, particularly panic attacks and somatic symptoms, are often intermittent. However this raises an additional problem, namely that symptoms can vary in a number of ways in addition to intensity. In particular they may vary in frequency and duration. These three parameters are not always clearly differentiated on existing scales. For example the Leeds Self Assessment Scales (Snaith et al, 1976) have four response categories for each item: definitely (3), sometimes (2), not much (1) and not at all (0). It can be seen that both frequency and intensity parameters are confused within a single scale and that an additional parameter, certainty ('definitely') is also included. These three parameters may not however always covary and thus could be confusing if included in a single scale,. A similar problem may be discerned in the Clinical Anxiety Scale, a rating scale derived from the Hamilton Rating Scale by the same group of authors (Snaith et al, 1982). Other scales do not specify which parameter(s) they are referring to. For example Foulds and Bedford's DSSI/SAD scale (Bedford and Foulds, 1978), does not specify any parameter but simply asks the subject how upsetting the symptom has been. This rating of upset may relate to any or none of these parameters.

The Measurement of Clinical Depression

A particular problem arising from the measurement of clinical depression is that the syndrome consists of a number of components which may be differentiable empirically and theoretically. In particular affective,

cognitive and somatic components are frequently identified and are referred to by Abramson et al (1978) in their original paper. Measures of depression may however vary considerably in the extent to which they sample symptoms from each component. For example the Hamilton Rating Scale of Depression (Hamilton, 1967) is biased towards somatic items while the Beck Depression Inventory (Beck et al, 1961) includes a considerable number of cognitive items.

The factor analytic study of the BDI in a patient population, carried out by Weckowicz et al (1967) revealed that a number of identifiable components could be demonstrated. The first component was loaded highly by mainly cognitive, low self esteem items: guilt, sense of punishment, self-accusation, sense of failure, self-punitive wishes and self-hate. The second factor, labelled a retardation factor, was loaded highly by work inhibition, fatiguability, lack of satisfaction and depressed mood. The third factor, labelled "somatic disturbance" was loaded most highly by sleep disturbance, loss of appetite, weight loss and loss of libido. It is interesting to note that a general "severity" factor did not emerge and that the first factor found was a "cognitive one". It may therefore be important to be aware of the symptoms sampled by any measure of depression and that any association between that measure and another (eg of attributions) may be due principally to one component of depression.

AIM OF STUDY

The aim of the study reported in this chapter was to examine a number of the issues raised above. A sample of depressed and anxious patients completed questionnaire measures of anxiety and depressive symptoms. These were then subjected to a range of factor analytic methods to determine their factor structure and interrelationship. This analysis enabled a number of questions to be answered:

- 1) Can depression and anxiety be measured as differentiable clinical states and to what extent do they covary in the patient population?
- 2) Do the measures of depression and anxiety measure predominantly single unitary syndromes, or are sub components differentiable?
- 3) Are the frequency, duration and intensity parameters differentiable in the measurement of anxiety and to what extent do they covary?

Subjects

120 adult psychiatric day patients and out-patients were included in this study. Patients were aged 18 to 65 and presented with a neurotic psychiatric disorder. Patients were excluded if they had a monosymptomatic disorder (eg specific phobia or obsession); a psychotic disorder, alcoholism, drug abuse, psychopathic or sociopathic personality disorder or a mental handicap. In addition only patients whose symptoms were clearly distinct from their "normal" state were included. The most common presenting problems were of depression, inability to cope, panic attacks and a variety of anxiety symptoms.

METHODS AND PROCEDURE

Subjects completed four questionnaires which were all individually administered at the same session. They took approximately twenty to thirty minutes to complete. The questionnaires completed were:

- a) The Beck Depression Inventory (Beck et al, 1961) - a 21 item, multiple choice questionnaire covering most of the major symptoms of depression. A two week period over which each symptom is rated was used. (Appendix F)

- b) The Anxiety Symptoms Questionnaire (Frequency) (ASQF): a 13 item questionnaire including the main symptoms of clinical anxiety plus three additional items relating to depression. The items were adopted from other questionnaires including Delusions, Symptoms-States Inventory (Bedford and Foulds 1978), and Leeds Scales (Snaith et al 1976). Symptoms included were:
 - i) Physical Anxiety Symptoms - palpitations or sensation of butterflies in the stomach
 - dizzy attacks and unsteadiness
 - feeling tense or wound up
 - headache, neck and back pains

 - ii) Affective Symptoms
 - feeling very frightened or panicky
 - feeling scared or frightened
 - feeling insecure or lacking self confidence

- iii) Cognitive Symptoms - worry about future
- iv) Behavioural Symptoms - restlessness and inability to sit still

For each symptom the subject was asked how frequently this had occurred during the past fortnight: daily, most days, several days or not at all. The questionnaire is included in appendix G.

- c) The Anxiety Symptoms Questionnaire (Intensity) (ASQI): This was identical to the ASQF but instead of rating the frequency of the symptom occurrence, the greatest intensity during the past fortnight -very, quite, a bit - was rated. (Appendix H).
- d) The Anxiety Symptoms Questionnaire (Duration) (ASQD): This was also identical to the ASQF but the subjects rated the longest duration of the symptom - minutes, hours or days - during the previous fortnight. (Appendix I)

RESULTS

i) Subject Characteristics

These are given in Table 4i. Subjects were approximately equally divided between males and females, mean age of 37, mainly married and also approximately equally divided between those in full time and those not in employment. Most were attending as out-patients at clinical psychologist's clinics. Almost three quarters were at least mildly depressed, using a BDI cut off of 13 and almost one half were moderately to severely depressed, using a BDI cut off of 20 (suggested by Beck as criteria for ascribing severity of depression).

ii) Factor Structure of the Questionnaires

The individual items of the four questionnaires were each separately subjected to factor analysis. Matrices of product moment correlations between all pairs of items were computed separately for each questionnaire (BDI, ASQF, ASQI and ASQD). The matrices were factored using the Principle Factor method with communality estimated by iteration. Kaiser's criterion for ceasing factor

extraction was used and the resultant factor matrix subjected to a variety of orthogonal and oblique rotations including Varimax and Oblimax.

a) The Beck Depression Inventory (BDI)

The factor pattern proved robust under a variety of rotations including oblique (oblimax) solutions with a delta range 0.0 to 0.5. The orthogonal (varimax) solution will be discussed in more detail as it was similar to the oblique solutions but is easier to interpret and use in subsequent analyses (because the factors are uncorrelated).

Five factors were extracted with an eigenvalue greater than 1.0. The pattern of symptom loadings on each of the factors is given in Table 4ii. The first factor accounted for by far the greatest part of the variance, 30.1%, while subsequent factors accounted for between 7.7 and 5% of the variance each.

Factor 1: The first factor's highest loadings were on work retardation, fatigability, dissatisfaction, pessimism, crying, hypochondriacal pre-occupation and sadness with lower loadings on irritability, loss of interest in people, body image change and suicidal ideas. This factor is similar to the second factor found by Weckowicz et al (1967) which had its highest loadings on work retardation, fatigability, dissatisfaction and sadness. This factor was interpreted by Weckowicz et al as reflecting "loss of vital energy" and will be labelled here "loss of energy and interest". It is of interest that this factor includes in its highest loadings three of the four defining aspects of depression as stated in the DSM III criteria for major depression disorder: depressed mood, loss of interest, loss of energy and irritability. It may therefore reflect the core symptoms of depression. Finally it should be noted that in Weckowicz et al's study, the factor was second in order of percentage of total variance accounted for, whilst in this study it was by far the largest, as noted above.

Table 4ii FACTOR STRUCTURE OF BDI

Factor Method: Principle components with iterations: varimax rotation with Kaiser normalisation.

Number of Subjects: 120

	F1	F2	F3	F4	F5
1. Sadness	390*	265*	230*	455*	080
2. Pessimism	486*	176	338*	089	263*
3. Sense of Failure	081	422*	232*	423*	251*
4. Dissatisfaction	506*	326*	054	320*	041
5. Guilt	168	569*	249*	189*	238*
6. Expectation of Punishment	083	323*	051	107	813*
7. Self Doubt	014	576*	215*	058	109
8. Self-Accusation	175	657*	012	100	049
9. Suicidal Ideas	250*	330*	514*	143	239*
10. Crying	419*	146	108	212*	458*
11. Irritability	297*	085	097	544*	013
12. Social Withdrawal	277*	265*	036	444*	206*
13. Indecisiveness	173	447*	020	290*	224*
14. Body Image Change	268*	345*	125	162	107
15. Work Retardation	649*	183	069	194*	124
16. Insomnia	060	070	225*	456*	062
17. Fatiguability	620*	070	127	011	098
18. Anorexia	195*	083	847*	232*	053
19. Weight Loss	081	123	463*	012	002
20. Somatic Preoccupation	400*	016	283*	165	032
21. Loss of Libido	151	123	192*	406*	092
% of Total Variance accounted for:	30.1	7.7	7.3	6.1	5.0

(Decimal Points Omitted)

* Significance $P < 0.05$ (Burt-Banks Procedure)

Factor 2: The second factor's highest loadings were on self accusation, self doubt, guilt, indeciveness and sense of failure. There were lower loadings on body image change, suicidal ideas, dissatisfaction, expectation of punishment, sadness and loss of interest in people. This factor is similar to the first factor found by Weckowicz et al (1967) which had its highest loadings on guilt, expectation of punishment, self accusation, sense of failure, self doubt, and suicidal ideas. This factor was interpreted by Weckowicz et al as a factor of guilty depression but this factor was interpreted here as characterised by a "negative attitude to self" with high loadings on self accusation, self doubt, guilt and sense of failure.

Factor 3: The third factor's highest loadings were on loss of appetite, suicidal ideas and weight loss with lower loadings on pessimism, somatic preoccupation, guilt, sadness, insomnia, sense of failure, guilt and self doubt. This factor is more difficult to interpret as the items do not hang together in a very clear way. The highest loadings suggest that it reflects a more severe depression but the absence of substantial loadings on insomnia and loss of libido make it difficult to view this as a somatic factor. This factor is therefore interpreted as reflecting severe depressive symptoms although it is acknowledged that this is not very clear. It bears some similarities to the third factor of Weckowicz et al (1967) which had its highest loadings by loss of appetite, weight loss and sleep disturbance. However this factor had considerably more significant loadings than that of Weckowicz et al, which more clearly resembled a somatic disturbance factor.

Factor 4: The highest loadings on this factor were irritability, sadness, social withdrawal, sense of failure, insomnia and loss of libido with small loadings on dissatisfaction, indeciveness, anorexia and crying. This factor appears to represent a kind of irritable miserableness although the substantial loadings on sleep disturbance and loss of libido suggest that it is a more severe psychopathological factor than this might suggest.

Factor 5: There was a very high loading on this factor by expectation of punishment and a lower substantial one by crying. No interpretation or further comments are made of this factor.

In summary the results of the factor analysis were in several respects similar to that of Weckowicz et al (1967) and are largely in accord with previous findings concerning the BDI. The first factor in this study is a predominantly affective and motivational factor and may be compared with the second factor of Weckowicz although the latter factor is simpler in its pattern of loadings. The second factor in this study is a predominantly cognitive factor and resembles the first factor of Weckowicz. The third factor is less clear. It resembles the third, "somatic", factor of Weckowicz in its high loadings on anorexia and weight loss but has a considerably smaller loading on insomnia than in the former study.

b) Factor Structure of the ASQI

The individual items of the ASQI were subjected to an identical analysis to the BDI. The factor pattern again proved robust under a variety of rotations. The orthogonal (Varimax) solution will be discussed in more detail. Three factors were extracted with an eigenvalue greater than 1.0. Their pattern of symptom loadings is given in table 4iii. The factors accounted for 38.2% , 11.3% and 7.7% of the variance respectively.

Factor 1: The highest loadings on the first factor were panic feelings, frightened feelings and palpitations and butterflies in the stomach with smaller loadings of feeling tense, dizzy attacks, lack of self confidence, restlessness and feeling insecure. This factor therefore includes all the anxiety symptoms except worry about the future and may be interpreted as reflecting generalised symptoms of anxiety.

Factor 2: The second factor's highest loadings were on worry about the future, feeling insecure, dwelling on the past, sadness and lack of self confidence with smaller loadings on worse AM and feeling frightened. This factor therefore is characterised by predominantly cognitive symptoms of both depression and anxiety but with substantial loadings on both depressive and anxious affect. It is therefore interpreted as reflecting

Table 4iii

FACTOR STRUCTURE OF ASQI (INTENSITY)

Factor Method: Principle Components with iterations: varimax rotation with Kaiser normalisation.

Number of Subjects: 120

	F1	F2	F3
1. Panic Feelings	808*	188*	165
2. Palpitations or Butterflies in Stomach	605*	074	309*
3. Worry about Future	114	737*	098
4. Restlessness	281*	145	336*
5. Dizzy Attacks	392*	120	211*
6. Lack of Self Confidence	379*	400*	390*
7. Frightened Feeling	729*	304*	321*
8. Sadness	173	487*	510*
9. Worse AM	125	362*	044
10. Feeling Insecure	249*	660*	390*
11. Feeling Tense	389*	169	718
12. Headaches, Neck and Back Pains	304*	109	049
13. Dwelling on Past	122	566*	142
% of Total Variance	38.2	11.3	7.7

(Decimal Points Omitted)

* Significance P. 0.05(Burt-Banks Procedure)

cognitive and affective symptoms of anxiety and depression.

Factor 3: The highest loadings on this factor were feeling tense, sadness, lack of self confidence and feeling insecure with smaller loadings on restlessness, feeling frightened and palpitations. This factor is more difficult to characterise and will not be interpreted further at this stage.

In summary the results of this factor analysis produced a single generalised anxiety factor which, with the exception of worry, was loaded substantially by all the anxiety symptoms. It appeared to be a specific anxiety factor as none of the depressive symptoms loaded on it substantially. The second factor was unexpected, consisting of both cognitive and affective aspects of depression and anxiety. Both worry about the future and dwelling on the past had high loadings on this factor.

c) ASQF

The results of the factor analysis of the ASQF were in some respects similar to that of the ASQI. Three factors were extracted with an eigenvalue greater than 1.0, accounting for 35.8%, 11.6% and 7.9% of the variance respectively. The pattern of loadings produced by the orthogonal factor solution are presented in table 4iv. The solution was robust under a variety of rotations as with the BDI and ASQI.

Factor 1: This factor was very similar to factor two of the ASQI with highest loadings on dwelling in the past, feeling insecure and worry about the future and substantial loadings on sadness, worse AM, feeling frightened and lack of self confidence. It is also interpreted as reflecting cognitive and affective symptoms of anxiety and depression.

Factor 2: The second factor was similar to factor 1 of the ASQI but differed in not having significant loadings on dizzy attacks and in having a significant loading on sadness. Thus while it predominantly reflects generalised symptoms of anxiety it is less clearly defined than in the case of the ASQI.

Factor 3: This factor was also similar to factor 1 of the ASQI but had no significant loading on palpitations and restlessness, and

Table 4iv

FACTOR STRUCTURE OF ASQF (FREQUENCY)

Factor Method: Principle Components with iterations: varimax rotation with Kaiser normalisation.

Number of Subjects: 120

	F1	F2	F3
1. Panic Feelings	242*	508*	288*
2. Palpitations or Butterflies in Stomach	120	749*	110
3. Worry about Future	523*	171	257*
4. Restlessness	219*	367*	211*
5. Dizzy Attacks	081	134	734*
6. Lack of Self Confidence	319*	308*	489*
7. Frightened Feeling	376*	500*	480*
8. Sadness	577*	271*	173
9. Worse AM	495*	148	071
10. Feeling Insecure	663*	210*	273*
11. Feeling Tense	184*	497*	312*
12. Headaches, Neck and Back Pains	029	233*	418*
13. Dwelling on Past	682*	041	086
% of Total Variance	35.8	11.6	7.9

(Decimal Points Omitted)

* Significance $P < 0.05$ (Burt-Banks Procedure)

had a significant loading on worry about the future.

Factors 2 and 3 of the ASQF therefore are both similar to factor 1 of the ASQI and each has as its highest loading, a physical symptom of anxiety with no significant loading on depressive items. These factors do not therefore represent different components of anxiety.

e) ASQD

The results of the factor analysis of the ASQD were similar to that of the ASQI, particularly for factors 1 and 2. Three factors were extracted with an eigenvalue greater than 1.0. The factors accounted for 38.9%, 11.9% and 8.0% of the variance respectively and were robust under a range of rotations. The orthogonal solution factor loadings are presented in table 4v.

Factor 1: This factor closely resembles factor 1 of the ASQI, having significant loadings on all anxiety symptoms apart from worry about the future and no significant loadings on the three depression-related symptoms. The highest loadings were also the same: panic feelings, palpitations or butterflies and frightened feelings.

Factor 2: The second factor also closely resembles the second factor of the ASQI and first factor of ASQF with highest loadings on future worry, feeling insecure and dwelling on the past. There were relatively minor differences in some of the smaller loadings but the factor again is interpreted as reflecting mainly cognitive symptoms of anxiety and depression.

Factor 3: The third factor was loaded substantially on feeling insecure, sadness, worse AM, lack of self confidence and feeling tense with smaller but significant loadings on feeling frightened, dwelling on the past, palpitations or butterflies in stomach, and panic feelings. Indeed only three items, future worry, dizzy attacks and headache, neck and back pains, did not have significant loadings on it suggesting that it may be a general severity factor.

Table 4v

FACTOR STRUCTURE OF ASQD (DURATION)

Factor Method: Principle Components with iterations: varimax rotation with Kaiser normalisation.

Number of Subjects: 120

	F1	F2	F3
1. Panic Feelings	634*	217*	185*
2. Palpitations or Butterflies in Stomach	693*	026	205*
3. Worry about Future	146	769*	085
4. Restlessness	372*	030	457*
5. Dizzy Attacks	576*	131	159
6. Lack of Self Confidence	376*	388*	380*
7. Frightened Feeling	672*	275*	297*
8. Sadness	250*	385*	496*
9. Worse AM	035	182*	466*
10. Feeling Insecure	165	640*	520*
11. Feeling Tense	574*	212*	425*
12. Headaches, Neck and Back Pains	505*	132	062
13. Dwelling on Past	173	560*	206*
% of Total Variance accounted for:	38.9	11.9	8.0

(Decimal Points Omitted)

* Significance $P < 0.05$ (Burt-Banks Procedure)

iii) Inter-relationship of the Symptom Factors

The factor scores of each subject on each factor were calculated from the factor loadings and a correlation matrix between all factor scores (with the exception of the fifth factor of the BDI) computed. The results of this analysis are presented in tables 4vi and 4vii. This provided additional supportive evidence concerning the interpretation of each of the original factors extracted.

BDI Factors:

Factor 2 interpreted as reflecting the cognitive component of depression, 'negative attitude to self', correlated significantly and most strongly and consistently with each of the ASQI, ASQD and ASQF factors interpreted as cognitive and affective symptoms of anxiety and depression. It did not correlate significantly with any of the factors interpreted as being generalised anxiety symptom factors. This finding strengthens the interpretation of the cognitive factors.

ASQ Factors:

All the ASQ factors interpreted as being cognitive and affective symptom factors intercorrelated substantially and significantly with intercorrelations of 0.53, 0.77 and 0.82. The factors interpreted as generalised anxiety symptom factors were also highly and significantly intercorrelated with intercorrelations of 0.76, 0.63, 0.64, 0.52 and 0.46. The highest correlations in both cases were between ASQI and ASQD factors with ASQF factors being rather less highly correlated with the former.

The findings support the proposition that the two ASQI and ASQD factors are probably measures of general anxiety symptoms and cognitive symptoms of anxiety and depression respectively.

iv) Correlation between BDI Total Score and Factor Scores

As part of the analysis described above the product-moment correlation between individual subject factor scores and the BDI total score were calculated. The results are presented in Table

Table 4vi

The Inter-relationships of the Symptom Factors (1)Anxiety Symptom Questionnaire Factors (pearson product-moment correlations)

	ASQI Factor 1	ASQI Factor 2	ASQI Factor 3	ASQI Factor 1	ASQI Factor 2	ASQI Factor 3	ASQD Factor 1	ASQD Factor 2	ASQD Factor 3
ASQI Factor 1	Generalised Anxiety						764***	119	236*
ASQI Factor 2	Cognitive and Affective Symptoms						057	819***	402***
ASQI Factor 3							296**	133	525***
ASQF Factor 1	Cognitive and Affective Symptoms			177	771***	326***	088	530***	570***
ASQF Factor 2	Anxiety Symptoms			630***	098	399***	639***	058	189*
ASQF Factor 3	Anxiety Symptoms			486***	233*	250**	523***	390***	139
ASQD Factor 1	Generalised Anxiety			764***	057	269*			
ASQD Factor 2	Cognitive and Affective Symptoms			119	819***	133			
ASQD Factor 3				236*	402***	525***			

(Decimal points omitted)

* p < 0.05

** p < 0.01

*** p < 0.001

Table 4vii
 The Inter-relationship of the Symptom Factors (2)

BDI Factors and Anxiety Symptom Questionnaire Factors (pearson product moment correlations)

	BDI Factor 1 Loss of interest and motivation	BDI Factor 2 Negative attitude to self	BDI Factor 3 Severe symptoms of depression	BDI Factor 4	BDI Total Score
ASQI Factor 1 Generalised Anxiety	198*	070	270**	128	230*
ASQI Factor 2 Cognitive and Affective Symptoms	339***	480***	240**	360***	330***
ASQI Factor 3	339***	198*	030	467***	016
ASQF Factor 1 Cognitive and Affective Symptoms	240**	466***	175	345***	360***
ASQF Factor 2 Anxiety Symptoms	178	062	232*	261**	210*
ASQF Factor 3 Anxiety Symptoms	303***	087	186*	251**	130
ASQD Factor 1 Generalised Anxiety	284**	003	275**	242**	160
ASDQ Factor 2 Cognitive and Affective Symptoms	255**	495***	143	288**	340***
ASQD Factor 3	325***	258**	214*	491***	380***
BDI Total Score	16	39***	27**	46***	

4vii. Inspection of this table reveals that the general anxiety symptom factors only weakly or non significantly correlated with the BDI total score (range 0.130 to 0.230). This suggests first that the BDI, in this population at least, is not just a measure of generalised neurotic psychopathology. Secondly it suggests that the anxiety symptom factors are relatively specifically related to anxiety. They correlate only weakly with both BDI total score and BDI factors (all but one correlation being below 0.3). The pattern of factor loadings strengthens this interpretation since only items concerning symptoms of anxiety (derived from existing validated anxiety scales) had significant loadings on the anxiety factors (especially ASQI and ASQD factor 1).

v) Relationship Between Symptom Factors and Subject Characteristics

The relationship between the symptom factors described above and the age, sex, marital status and employment status of subjects was examined. Pearson correlation coefficients between age and the symptom factors were all statistically non-significant. No sex differences were found (as indicated by t-tests computed between male and female subjects for each symptom factor). Finally a series of ANOVAs were carried out on each set of factor scores with marital status and employment status as independent factors. These revealed no significant relationship between the factor scores and either of these variables.

Discussion

It is now possible to return to the questions posed in the introduction to this study and consider them in the light of the results given above.

1) Can depression and Anxiety be Measured as Differentiable Clinical States?

The results of the factor analysis of questionnaires concerning symptoms of anxiety and depression, ASQI, ASQD, ASQF and BDI, together with the examination of the correlations between factor scores derived from this analysis suggest that anxiety and depression can be measured as relatively differentiable states. In particular the ASQI and ASQD yielded very similar factors both of which were significantly loaded by symptoms of anxiety only, the highest

loadings being on core anxiety symptoms:- "panic feelings", "feeling frightened" and "palpitations or butterflies in stomach". These factors both had low correlations (0.160, 0.230) with BDI total score, a validated measure of depression though it must be admitted that one of the BDI factors (the most important statistically) also had a low and nonsignificant correlation with Total BDI score. Although the validity of the ASQI and ASQD factors have not been established by reference to clinical ratings of symptoms, it seems reasonable to conclude that they are at least related to the severity of anxiety symptoms.

2) Do Measures of Depression and Anxiety Measure Predominantly Single Unitary Syndromes, or are Subcomponents Differentiable?

The factor analysis of the BDI suggests that there are differentiable subcomponents of depression. Two factors emerged which fairly closely resembled those obtained by Weckowicz et al (1967) reflecting respectively predominantly affective and motivational symptoms (loss of energy, loss of interest, depressed mood) and cognitive symptoms (sense of failure, self blame, guilt). A third factor, which less closely resembled the third factor of Weckowicz et al, suggested more tentatively that a somatic disturbance component may be differentiable. The result of this study therefore replicates most of the main findings of Weckowicz et al. They are also largely in accord with other factor analytic studies of the BDI, reviewed by Steer, Beck and Carson (1986). They argue that the BDI represents three major factors - negative attitudes/suicide, physiological and performance difficulty. They also note, however, that the major dimension to emerge is a cognitive self-evaluative one. In this study it was the most readily interpretable factor although the second in order of proportion of total variance accounted for. Again, it must however be cautioned that the interpretation of the factors derived in this and other studies are based solely on the pattern of factor loadings and have not been validated against an independent criterion.

The factor analyses of the anxiety symptom questionnaires did not provide any consistent evidence that subcomponents of anxiety are differentiable in this population. All symptoms of anxiety, with the exception of "worry about future problems", loaded significantly on

the first factors of the ASQI and ASQD. This may be partly because of the relatively few symptoms of each component included in the questionnaire. However there was no evidence that, for example, the somatic symptoms of anxiety tended to associate together, separately from the emotional and cognitive symptoms.

In conclusion, there was evidence from factor analysis of the BDI, across a range of methods including orthogonal and oblique rotations, that the BDI total score reflects a number of subcomponents of depression. These could provisionally be characterised as reflecting affective and motivational symptoms (particularly loss of energy and interest), cognitive symptoms and somatic symptoms, which emerged as a single main factor in two of the three questionnaires.

A cognitive and affective factor also emerged consistently from all three anxiety questionnaires and correlated most strongly with the negative attitude to self factor of the BDI. Finally a mixed depression/anxiety factor emerged in two of the three questionnaires, correlating more strongly with the BDI factor than the generalised anxiety symptom factor.

3) Are the Frequency, Duration and Intensity Parameters Differentiable in the Measurement of Anxiety and to What Extent do they Covary?

The pattern of correlations between the symptom factors of the ASQI, ASQD and ASQF suggest that these parameters are related but perhaps differentiable. The highest correlations were between the ASQI and ASQD, with correlations of 0.764, 0.819 and 0.525 between the three factors of the respective questionnaires. The ASQF yielded a different, less clear factor structure with a less clear pattern of correlations with other factors. Further, subjects expressed greater difficulty when completing the ASQF than the other two questionnaires. It may be therefore that the ASQF is a less reliable questionnaire although it is also possible that it does measure a different aspect of symptomatology.

In summary it seems likely that the ASQD and ASQI yield reasonably valid measures of anxiety but it is less clear to what extent they can be differentiated. It may therefore be that asking questions concerning either the intensity or duration of symptoms yields similar information concerning the severity of symptoms. It is considerably more doubtful

that this is the case with the frequency of symptoms.

Conclusion

To conclude, the results of this study indicate that the clinical states of anxiety and depression can be measured reasonably independently as continuous variables and that the measure of depression reflects a number of subcomponents of depression. A subcomponent reflecting predominantly cognitive symptoms, symptoms of low self esteem, emerged particularly clearly.

CHAPTER 5

THE RELATIONSHIP BETWEEN INTERNALITY AND SELF ESTEEM: A CROSS SECTIONAL STUDY

In Chapter 3 the relationship between causal explanations and expectancies on the one hand, and psychiatric symptomatology on the other, were examined. Evidence was found that depressed patients attribute the causes of their current concerns to stable and uncontrollable causes and that, in the case of uncontrollable causes, they do this to a greater extent than non-depressed, anxious patients. Findings for internality and globality were less clear. Results were largely obtained by comparing two groups of patients divided on the basis of their main PSE category class. It was however noted that similar results were obtained using other methods of dividing the patient population.

In Chapter 4 the measurement of depression and anxiety in clinical populations was examined. It was concluded that it was to some extent possible to differentiate and measure clinical depressions and anxiety as continuously varying states despite the frequently reported finding that such measures both covary and co-exist in patient populations.

This chapter describes a further study of the relationship between symptomatology and causal explanations and expectations in clinical populations. The focus of the study was the internality dimension(s). It involved the administration of measures of symptoms, and of a number of internality dimensions, to a population of non-psychotic psychiatric patients. The principal aim of the study was to examine whether there is a specific association between the internality dimensions and the self esteem lowering found in depression, as hypothesised in the reformulated learned helplessness theory (Abramson et al, 1978).

INTERNALITY AND DEPRESSION

The relationship between internality and depression raises a number of issues:

- 1 How is internality defined and measured, and to what does the internality refer?
- 2 What may be the relationship between depression and the various meanings of internality?
- 3 Is there a "depressive paradox" (Abramson and Sackeim, 1978) arising from depressives' belief in both their helplessness and internally directed blame?

1 The Meanings of Internality

The concept of internality has been used in a number of different ways. These differ in the meaning given to internality itself, the temporal focus (particularly past versus present and future) and the object of the internal attribution.

Heider (1958), one of the founders of attribution theory, proposed following a phenomenological study of every day or common-sense "psychology", that the explanations people give for the causes of outcomes of actions can be divided into internal and external causes. Internal causes, in his model, are those lying within the person while external causes lie within the environment. Rotter (1966) proposed the concept of locus of control which involved the distinction between outcomes perceived as causally related to a person's own behaviour and characteristics (internal) and those perceived as causally related to external forces such as circumstances or luck. Rotter's concept was essentially concerned with whether subjects perceived outcomes as depending on their own behaviour and attributes or not. Abramson et al (1978) specify the usage of internality in their paper as fundamentally concerning the person's comparison of themselves with their peers or "relevant" others. They are concerned with peoples' attributions concerning their failure to overcome a problem. This failure is attributed to internal causes if the person believes that others would have been able to overcome the problems, but to external causes if they believe that others would not have done any better than themselves. Finally a form of internality which has not been much discussed formally in an attribution framework is in the sense of comparison with internal norms or standards. This usage is similar to that of Abramson et al but with internal standards substituted for the person's peers. Internal causes, in this sense, are those which

involve the person's failure to meet their own standards. This usage of internality has however been used informally by a number of cognitive theorists eg Ellis (1962). They have suggested that one of the cognitive distortions or irrational assumptions in depression involves excessively high or impossibly high standards and expectations by the depressed person of themselves.

These usages while distinguishable may overlap considerably. Indeed Abramson et al (1978) have argued that their way of defining internality is actually similar to Heider's and that Heider does actually rely on social comparison as a major determinant of internality. Nonetheless the various definitions clearly have implications for how internality is measured.

The usage of internality also differs in its temporal forms. Thus, for example, both Heider and Abramson et al are mainly concerned with the internality of the causes of failures (and successes) and therefore focus on the past. Rotter however is more concerned with how much outcomes are dependent on a person's behaviour or characteristics and therefore has more of a present and future focus. It would seem, in principle, possible to apply any usage of internality both to past and to present and future causes.

Finally it is important to clarify what the object of the internal attribution is. All the usages discussed above concern the cause of outcomes of behaviour. None concern the causes of life events which "happen to" the person or emotional states. Indeed Heider clearly differentiates between such events, which he labels "heteronomous events", from those arising from the person, "autonomous events". The meaning of internality may be rather different if the focus is a cause of an event rather than an outcome. The situation is however further complicated because people can view the same outcome as either an imposed event or an outcome of actions. For example illness may be attributed to something the person did or even to their personality (eg type A personality and coronary disease), or may be viewed simply as a something which happens to the person.

To summarise, at least four different usages of internality and two temporal foci have been identified. These refer to factors within the person versus factors outside the person, locus of control, comparison

with peers and comparison with internal standards. These can concern either past or present and future outcomes.

2 The Relationship Between Internality and Depression

As has been noted above, the reformulated learned helplessness theory proposes that internal attributions concerning the person's failure to overcome a problem, to modify an expected outcome, will be related to the lowering of self esteem. Internality, it will be recalled, is used in the sense of comparison with peers. There is however little relevant evidence available in the literature. Few studies have attempted to measure self-esteem as well as depression. Zautra et al (1985) in a study of students found that self esteem was significantly correlated with all the attributional subscales of the ASQ. Criticisms of the internality subscale for negative items have however already been made. Rothwell and Miller (1983), in their comparison of recently redundant men with men in secure employment, found that in the redundant group, but not the control group, internality for negative outcomes (as measured by ASQ) was correlated with both depression as measured by the BDI and low self esteem.

There have therefore been no studies in psychiatric populations in which the relationship between measures of the internality of the perceived cause of the subject's failure to overcome real life problems, and measures of depression and loss of self esteem has been examined. Such studies are needed to test more adequately this aspect of the reformulated learned helplessness theory.

3 The Depressive Paradox

The concept of internality is also important to an understanding of the "depressive paradox" proposed by Abramson and Sackeim (1977). The paradox, they suggest, is that depressives appear both to blame themselves and perceive themselves as helpless at the same time. How, they ask, can depressives blame themselves for outcomes over which they perceive themselves to have no control? Abramson and Sackeim reviewed evidence for the existence of this paradox and proposed a number of solutions. Four of these five solutions were that there is no paradox because the self blame and helplessness concern different groups of depressives or different outcomes, or because either the

proposition that depressives are self blaming, or that they perceive themselves as being helpless, is false. Peterson (1979) attempted to study this paradox in a mildly depressed student population. He found some evidence to support the proposition that there is indeed a paradox. Depression severity, as measured by the BDI, correlated with ratings of both helplessness and guilt for a number of hypothetical roles including "myself as a loser", "myself when I'm sad", and "myself as a student". It may however be questioned to what extent ratings of felt helplessness or guilt in hypothetical situations (or roles) are valid measures of perceived helplessness (in the sense of controllability) and self blame.

The existence of this paradox is not well established. However the clinical literature cited by Abramson and Sackeim does suggest that it might well exist. A number of possible explanations of this paradox have been offered. Peterson, Schwartz and Seligman (1981) have suggested that attributions to characterological causes may lead subjects to feel both guilty and helpless. Characterological causes are a kind of internal cause and are distinguished from behavioural causes. The former refers to relatively stable attributes of the person such as their personality or abilities while the latter refer to the person's actions. Their suggestion, therefore, is that if a person attributes a failure to a lack of personal qualities or abilities, they may both blame themselves as the cause lies within them, and feel helpless as there is nothing they can do about it. In contrast attributions to the person's actions may still lead to self blame but not to helplessness. In a study of depression and attributions (using a version of the ASQ) in a student population, Peterson et al did indeed find higher levels of rated helplessness and guilt for events whose causes were classified independently as characterological compared with both behavioural and external causes. Once again this study relied on ratings of felt helplessness and guilt.

A second explanation of the paradox, similar to that of Peterson et al, is that depressives believe that there was something that other people could and would have done to overcome the problem but which they didn't because of a characterological failing. In other words they may perceive themselves as being personally not universally helpless, and blame themselves for their personal failings. Such an

explanation is in accord with Abramson et al's proposals regarding the role of internality in the sense of comparison with others. In both cases it may however be questioned why people should blame themselves for their own personal characteristics over which they have apparently no control.

A third explanation is that while depressives may both perceive themselves as being helpless and blame themselves, they may in fact believe that there was something that they could have done in the past but didn't because, for example, they did not think of doing it. The depressives may therefore believe that the outcome was controllable by them but is not any longer. They may then quite "logically" both blame themselves for failing to take the actions they could have taken and perceive themselves as currently helpless. It may be suggested that this argument runs counter to the findings of Peterson et al that characterological causes were highly positively correlated with severity of depression while behavioural causes were moderately negatively correlated with depression. The finding in Chapter 3 that depressives give more characterological than behavioural causes may also be cited. It is not entirely clear however that behavioural and characterological causes are completely distinct and independent. For example a person may give as the cause of their failure to prevent the breakup of their marriage, the fact that they frequently shouted and were irritable with their spouse. If asked why they behaved in this way they might reply that they are a short tempered person. Whether such a cause is regarded as behaviour or character may depend on the level of explanation given by the person.

In summary Abramson and Sackheim (1977) proposed that there is a depressive paradox that depressives both perceive themselves as being helpless and blame themselves at the same time. A number of resolutions and explanations of this paradox have been considered. Two main possible explanations are offered. One is that in the case of personal helplessness a depressive may feel both helpless and be self blaming because they perceive the cause of their helplessness to lie within themselves, within their character or abilities. A second is that depressives perceive the past locus of control as being internal but perceive themselves as currently helpless. In this explanation the depressed person believes that they could have done something to avoid the negative outcome but did not, but also that they are

currently unable to do anything to change the outcome. They perceive themselves as currently helpless but in the past as being able to control the outcome. This second explanation is in many respects the opposite explanation to the former one.

QUESTIONS ADDRESSED IN THIS STUDY

In this study the following questions were addressed concerning the nature of the internality dimension and its relationship to depression.

- 1 What is the relationship between the different usages of the term internality? In particular to what extent are the four senses identified above differentiable and to what extent do they covary.
- 2 To what extent is the internality of the cause of a person's failure to overcome current concerns and symptoms specifically associated with the self esteem deficit of depression?
- 3 Do depressed patients both blame themselves for their problems and perceive themselves as having been in the past and being in the future helpless?

These questions were initially addressed using a cross-sectional design as outlined in the introduction to this study, but a longitudinal study similar in design to that carried out by Firth and Brewin (1982) was also carried out and is reported in Chapter 6 below.

COMPARISON WITH THE PREVIOUS STUDY AND OTHERS REPORTED IN THE LITERATURE

As noted earlier few other studies have attempted to examine the relationship between internality and the self esteem deficit in depression. Those that have are limited in value because of both limitations in their measurement of internality, the use of hypothetical situations and non-clinical populations and a failure to measure the self-esteem deficit independently from other components of depression.

This study sought to overcome some of these limitations by using the following: a clinical population; real life current concerns; a number of measures of internality including one specifically concerning comparison with others; focussing the internality questions on the person's failure

to overcome their current concern rather than the cause of the current concern itself and finally using factors derived from the BDI which allow the independent measurement of the self esteem deficit (negative attitude to self) from the other symptoms of depression.

METHOD

Measures Taken

Each subject completed the following interview and measures in the following order:

- 1 Symptoms and Current Concerns Interview (SCCI)
- 2 The Beck Depression Inventory (BDI)
- 3 Anxiety Symptoms Questionnaire: Intensity (ASQI)
- 4 Anxiety Symptoms Questionnaire: Frequency (ASQF)
- 5 Anxiety Symptoms Questionnaire: Duration (ASQD)
- 6 Causal Beliefs and Expectancies Questionnaire (CBEQ)

All but 1 and 6 have been discussed in detail in Chapter 4

Subjects

The subjects were 46 psychiatric out-patients referred to a clinical psychologist (the author) by consultant psychiatrists or GPs. Referral was for some kind of behavioural psychotherapy for a presenting problem of anxiety symptoms, depression, inability to cope or phobic anxiety. All subjects were aged between 18 and 65. They were excluded from the study if it was not clear that their symptoms were distinctly different from their "normal state" (this difference might have been quantitative but must have been clear, ie patients were excluded if it appeared that their presenting problem was of an anxious personality). Subjects were also excluded if they had a past or current diagnosis of a psychotic disorder, including manic-depression; mental impairment or low intelligence; an antisocial personality disorder, alcoholism, drug abuse or a history of anti-social or acting-out behaviour (eg criminal offences, repeated self injury) or an organic disorder. None had taken part in the earlier study reported above.

1 Symptoms and Current Concerns Interview (SCCI)

This interview was derived from the Current Concerns Interview used in the study reported in Chapter 3 but bearing the following points in mind:

- i) to maximise the number of subjects who could be included in the study, a relatively brief interview phase was considered desirable. This would enable subjects to be included who were depressed and might be unable or unwilling to complete a two hour interview.
- ii) It emerged from the first study that the elicitation phase usually elicited many more than six current concerns but many were relatively minor. This reinforced the view that a briefer phase would be acceptable.
- iii) Pilot work suggested that subjects, with very little prompting, are able to give their main current concerns, sufficient to provide between three and six in most cases.
- iv) The interview was also modified to ensure that symptoms and life problems were clearly differentiated. Questions were also included concerning both failures to adjust to life changes and failure to modify expected future problems, neither of which were explicitly included in the original interview. These were both considered potentially very important sources of current concerns.

The interview schedule is included in appendix (J) and consists of a brief series of questions concerning the patient's main symptoms, main current life concerns, failures in adjustment and expected future problems. The current life concerns (excluding symptoms) were clarified on cards and ranked in order of importance. The three top ranking current concerns were utilised with the CBEQ's.

v) Causal Beliefs and Expectations Questionnaire (Appendix K, L)

The questionnaire consisted of two parts, the first dealing with causal explanations concerning the life problems and the second

dealing with causal expectations concerning future change in the life problems.

Part One: Causal Explanations (CBEQ(P))

The questionnaire consisted of six questions designed to measure the internality of the subject's causal beliefs about their failure to overcome the problem and past controllability over the problem.

- i) Internality in the sense of the cause lying within the self was examined by question 2 which was rated on a five point scale ranging from "entirely myself" (scored 1) and "entirely circumstances or other people" (scored 5).

- ii) Internality in the sense of universality was examined in question 3. The question referred to how much the subject believed other people would have reduced the problems and was rated on a five point scale from "totally" (scored 5) to "not at all" (scored 1). From the patient's rating of this question was subtracted their rating from question 1 ("How much has this problem decreased") to give a measure of how other people would, in their belief, have done in comparison with themselves. (A constant of five is added to the score obtained to avoid negative values.)

- iii) Internality in the sense of comparison with internal standards was examined question 5. The internality score was derived using a similar method to that used for universality, described above. The subject rated how much they should have reduced the problem on a five point scale ranging from totally (5) to not at all (1). The rating of this question was then subtracted from their rating in question one to give a measure of how much the problem has been reduced in comparison with their expectations of themselves.

- iv) Locus of control or controllability was examined in question 6 which concerned to what extent the subject believed that past change in the life problem had been under their control. The question took two forms depending on whether there had been any change in the problems. Answers were on a five point rating scale ranging from "not at all" (1) to "totally" (5).

Part Two: Causal Expectations (CBEQ(F))

This part of the questionnaire consisted of seven questions concerning the internality of expectations of future change. In addition two items were included concerning generalised expectancies of future change (questions 1 and 7).

- i) Internality in the sense of the cause lying within the self was examined in question 2. The question concerned how much the solution to the subject's problems was believed to lie within themselves rather than the environment. It was rated on a five point scale identical to that in question 2 of the CBEQ(P).
- ii) Internality in the sense of universality was examined in question 3 concerning how much the subject believed other people would be able to reduce the problems. It was rated on a five point scale (as in question 3 of the CBEQ(P) and yielded a measure of expectancies of other people. How the subject compared himself/herself with others was measured by subtracting from this rating the answer given to question 6 concerning how much the subject expected he/she will reduce the problem.
- iii) Internality in the sense of comparison with internal standards was examined by question 5 concerning how much the subject believed they should be able to reduce the problem. The internality score was obtained in a similar way to universality described above. The rating of how much the subject believed they ought to be able to change the problem was subtracted to how much they expected they would change the problem (question 6) to give a measure of how much their expectations of what they would achieve fall short of their own norms or standards.
- iv) Locus of control or controllability was examined by question 6, concerning how much the subject expected their actions to bring about change.

Procedure

All subjects were interviewed and completed the questionnaires either at the end of their first or second session with the clinical psychologist.

They took approximately 45 minutes to complete and were given in the following order:

- 1 Symptoms and Current Concerns Interview (SCCI)
- 2 The Beck Depression Inventory (BDI)
- 3 Anxiety Symptoms Questionnaire: Intensity (ASQI)
- 4 Anxiety Symptoms Questionnaire: Frequency (ASQF)
- 5 Anxiety Symptoms Questionnaire: Duration (ASQD)
- 6 Causal Beliefs and Expectancies Questionnaires (CBEQ) - for each of the main symptoms and three highest ranking current concerns a CBEQ(P) and CBEQ(F) were completed.

RESULTS

Subject Characteristics

The characteristics of all subjects, and subjects divided by median BDI score, are given in table 5i. There were no significant differences between more depressed and less depressed subjects in sex distribution, age, marital status, social class or median duration of psychiatric problem. Overall subjects were mainly married, with the modal social class, class III (skilled manual and non-manual workers), mean age 35, with a sex ratio close to two females to one male and median duration of psychiatric problem approximately one and a half years. There was a significant difference in employment status ($\chi^2=4.39$, $p < 0.05$) with fewer of the depressed subjects in full-time employment.

The distribution of BDI total scores is given in table 5ii. Nearly all subjects had a score of at least ten, the cut off frequently used in helplessness research in student populations. The population should therefore be regarded as ranging from mildly depressed to moderately to severely depressed. A substantial number of subjects, 18, scored over 20, the cut off suggested by Beck to indicate severe levels of depression. (Beck and Beamesdefer, 1974).

Interrelationships of the Internality Scales

Scores were computed for each subscale for each subject by averaging the subject's ratings over the main symptoms and three main current concerns. Where fewer than three current concerns were elicited the average of the

Table 51 Subject Characteristics

	Depressed (BDI \geq 18) N=23	Non-depressed (BDI \leq 17) N=23	All Subjects N=46
Sex: male	7	9	16
female	16	14	30
Age: mean	33.77 (N=22)	37.13 (N=23)	35.49 (N=45)
sd	8.91	9.39	9.07
Marital Status:			
single	4	3	7
married	18	18	36
divorced	1	1	2
widowed	0	1	1
Social Class:			
I & II	7	4	11
III	10	15	25
IV	5	3	8
V	1	1	2
Employment Status:			
full-time	10	17	27
part-time	5	1	6
not employed	8	5	13
Duration of Current Psychiatric Problem			
mean	3.03yrs	2.39yrs	2.70yrs
median	1.6 yrs	1.5 yrs	1.55 yrs
SD	3.59yrs	2.04yrs	2.87yrs
range	0.33-14.0yrs	0.25-9.0yrs	0.25-14.0yrs

Table 5ii Distribution of BDI Total Scores

BDI Total Score Range	Number of Subjects
0 - 9	2
10 - 13	7
14 - 20	19
21+	18

ratings obtained was utilised. (Occuring in eight subjects.)

(i) Internal Consistency of the Scales:

The internal consistency of the scales was computed using the formula for Cronbach's α . The values obtained are given in Tables 5iii and 5iv. The values ranged from 0.40 to 0.72 and are somewhat lower than the values reported in the earlier study with six current concerns. Once again the controllability scales yielded the lowest values of 0.40 and 0.48 for past and future controllability respectively. All other values lay between 0.50 and 0.72 and are comparable to those obtained for the ASQ. This suggests that, apart from controllability, the scales do reflect to some extent consistent individual differences although these differences could be either state dependent or more enduring, stable characteristics.

(ii) Interrelationships Between the Internality Scales Relating to Past Causes

Table 5iii shows the intercorrelations, given by Pearson's product-moment correlation between the three internality scales, the controllability scale and the two items concerning past expectations of others and self. As can be seen the scales did intercorrelate but with mainly modestly sized correlation coefficients only a small number being significant. Internality correlated modestly but significantly with universality but not controllability or failure to meet one's own standards. Universality correlated moderately with failure to meet one's own standards but not with controllability. These correlations suggest that although the three usages of internality are to some extent inter-related, they are not used in an identical fashion, particularly in the case of internality (within-outside self) and the other two forms of internality.

(iii) Inter-relationship Between the Internality Scales Relating to Future Change

Table 5iv gives the results for expected causes of future change. The correlations tended to be of greater magnitude than for past change suggesting less clear differentiation between the scales. Internality (within-outside self) did not correlate significantly with the two internality subscales or controllability. However universality did correlate substantially with both controllability (negatively) and

Table 5iii Inter-relationship Between Past Internality Scales and Controllability
(Pearson Product-moment Correlations)

	Internality	Universality	Failure to Meet Own Standards	Controllability	Past Expectation of Others	Past Expectation of Self
Internality (self cause of failure)	(0.72)					
Universality (comparison with others)	0.30*	(0.61)				
Failure to Meet Own Standards	0.14	0.47***	(0.53)			
Controllability	0.04	0.13	0.25	(0.40)		
Past Expectation of Others	0.34*	0.70***	-0.05	0.23	(0.69)	
Past Expectation of Self	0.17	0.17	0.72***	0.41**	(0.17)	(0.50)

Internal consistency estimated by Cronbach's α coefficient are given in brackets (N=36). The signs of correlations are such that positive values indicate a positive association between high levels of internality, controllability and past expectations of self and others.

* $p < 0.05$
 ** $p < 0.01$
 *** $p < 0.001$

Table 5iv Inter-relationship Between the Internality, Controllability and Amount of Future Change

(Pearson Product-moment Correlations)

	Internality (0.59)	Universality	Expected Failure to meet own standards	Controllability	Expectation of Others	Expectation of Self	Expected Change (amount)	Expected Change (Likelihood)
Internality (change depends on self)								
Universality (comparison with others)	0.23	(0.56)	(0.57)	(0.48)				
Expected Failure to Meet Own Standards	0.27	0.56***	-0.52***	0.48***	(0.72)			
Controllability	0.13	-0.61***	-0.15	0.50***	0.59***	(0.67)		
Expectation of Others	0.14	-0.33*	-0.25	0.20	0.06	-0.13	(0.65)	
Expectation of Self	0.08	-0.29*	0.19	0.57***	0.37*	0.30*	0.40**	(0.70)
Expected Change (amount)	0.43**	0.65***	0.41**					
Expected Change (Likelihood)	0.38**	-0.12						

Internal consistency estimated by Cronbach's α coefficient are given in brackets (N=36). The signs of correlations are such that positive values indicate a positive association between high levels of internality, controllability and past expectations of self and others.

* $p < 0.05$
 ** $p < 0.01$
 *** $p < 0.001$

"comparison with one's own expectations". This latter form of internality also correlated substantially and negatively with controllability. It may be however that these correlations are to some extent an artifact of how the scales are constructed since universality was computed from the difference between expectations of others and controllability and "comparison with one's own expectations" from expectations of self and controllability. This explanation is weakened by the fact that expectations of self, expectations of others and controllability are also intercorrelated (correlations of 0.20, 0.57, 0.40) although derived from separate items. It does therefore appear to be the case that subjects who compare themselves unfavourably with others also tend to compare themselves unfavourably with their own norms or standards and expect to have less control over future change.

(iv) Inter-relationships Between Past and Future Versions of Scales

Table 5v gives the intercorrelations between equivalent scales for past and future change. All correlations were positive and significant, those for internality (within-outside self), expectations of others and expectations of self were all greater than 0.70 indicating that subjects gave closely related ratings for past and future change on these scales. This suggests that these aspects of causal explanations are not specific to a particular temporal focus.

The Relationship Between Symptoms and Internality

The relationships between the internality scales for past change and the main symptom factors, as indicated by the product-moment correlation, are given in table 5vi. As predicted by the reformulated learned helplessness theory there were small but statistically significant correlations between BDI factor two (negative attitude to self) and universality. No other BDI factor or the ASQI factor one (anxiety symptoms) correlated significantly with any of the internality subscales indicating that this relationship is specific to the BDI factor two. This conclusion is further strengthened by the absence of a significant correlation between BDI total score and universality indicating that depression per se was not associated with universality, only low self esteem as measured by BDI factor two, "negative attitude to self". In addition there were no statistically significant correlations between either internality (within-outside self) or internality (failure to meet

Table 5v Relationship Between Past and Future Internality and
Controllability (Pearson Product-Moment Correlation)

<u>Dimension</u>	<u>Correlation Between Past and Future Ratings</u>
Internality	0.76***
Universality	0.51***
Failure to Meet Own Standards	0.32*
Controllability	0.37*
Expectation of Others	0.85***
Expectation of Self	0.72***

* $p < 0.05$
** $p < 0.01$
*** $p < 0.001$

Table 5vi Inter-relationship Between Symptom Factors and Causal Explanations Concerning Failure to

Overcome Current Concerns (Pearson Product-moment Correlation)

	BDI Total Score	BDI Factor One	BDI Factor Two	BDI Factor Three	BDI Factor Four	ASQI Factor One
Internality (within-outside self)	0.21	-0.16	0.21	0.06	0.09	0.22
Universality	0.27	0.07	0.31*	-0.04	0.02	0.15
Failure to meet own standards	0.08	0.17	0.01	0.15	0.03	0.03
Expectations of others	0.26	-0.20	0.48***	-0.16	0.20	0.00
Expectations of self	0.03	-0.09	0.13	0.08	0.04	-0.11
Controllability	0.14	-0.20	0.38**	0.07	0.08	-0.03

* $p < 0.05$

** $p < 0.01$

*** $p < 0.001$

one's own standards) and negative attitude to self. The relationship is therefore specific to internality in the sense of universality. There was also a larger correlation between BDI factor two and expectations of others indicating that subjects who had a more negative attitude to themselves tended to have higher expectations of others (ie rated others as more able to reduce the current concern the subject was facing). Finally there was a positive and statistically significant correlation between negative attitude to self and controllability indicating that subjects with a more negative attitude to themselves tended to be more internal with regard to past control ie rated current concerns as more controllable in the past. This will be discussed further below.

The correlation between the scales for the cause of future change and the symptom factors are given in Table 5vii. The pattern is similar to that for past change but in this case both universality and internality (within-outside self) were significantly correlated with BDI factor two only. There was a larger correlation between negative attitude to self and future expectations of others but no statistically significant correlation with controllability or generalised future expectations. Subjects who had a more negative attitude to themselves therefore tended to expect that they would be less able to change their concerns than other people, expected other people to be more able to change their current concerns (compared with subjects who had a less negative attitude to themselves) and rated change as depending more on themselves.

These results suggest that the relationship between negative attitude to self and universality may not be specific to past change but may extend to expected future change. The causal relationship between the three variables cannot be determined from these results. As reported earlier universality with respect to past and future change are highly intercorrelated and therefore any relationship between either past or future universality and another variables would tend to be reflected by an association between the variable and the other form of universality.

The Relationship Between Depressive Self Blame and Helplessness

The relationship between depressive self blame and helplessness can be addressed by reference to the correlations between the BDI factor two (negative attitude to self) and the two controllability scales. It will be recalled that in Table 5vi there was a positive statistically

Table 5vii

Inter-relationship Between Symptom Factors and Causal Expectations concerning Future Change in Current Concerns

	BDI Total Score	BDI Factor One	BDI Factor Two	BDI Factor Three	BDI Factor Four	ASQI Factor One
Internality (within-outside self)	0.17	-0.10	0.29*	-0.14	-0.01	0.17
Universality	0.30*	0.06	0.31*	-0.01	0.01	0.05
Comparison with internal standards	0.25	0.11	0.15	0.12	0.10	0.07
Expectations of others	0.23	-0.12	0.46***	-0.21	-0.09	-0.20
Expectations of self	0.07	-0.13	0.24	-0.06	-0.04	-0.20
Controllability	-0.14	-0.22	0.10	-0.18	-0.12	-0.24
Expectation of change (likelihood)	-0.05	-0.08	0.10	-0.18	-0.14	0.01
Expectation of change (amount)	-0.16	-0.17	-0.03	-0.09	-0.03	0.02

* p < 0.05

** p < 0.01

*** p < 0.001

significant correlation of 0.38 between negative attitude to self and past controllability. This indicates that in this subject population there was no depressive paradox in that subjects who had a stronger negative attitude to themselves and were more self blaming, also rated themselves as having more control over past change. There was no significant correlation between future controllability and negative attitude to self. However it may be argued that the more relevant item is future internality (within-outside self) since this refers to how much future change is expected to depend on changes in the self (which is the sense used by Rotter in his concept of locus of control) rather than how much change is expected to be brought about by one's actions (which is similar to Bandura's concept of self efficacy). There was in fact a small but statistically significant positive correlation between internality and BDI factor two suggesting once again that a more negative attitude to self was associated with a more internal locus of control.

These findings therefore suggest that there may not be a depressive paradox. Subjects who were more self blaming tend to rate themselves as having had more control over current concerns in the past, not less as was predicted by Abramson and Sackeim (1977). They also tended to expect future change to depend on themselves more but this of course does not involve any paradox.

DISCUSSION

The Relationship Between the Different Forms of Internality

The results presented above indicate that the different forms of internality are differentiable and relate to symptomatology with different patterns of association. It is of particular note that internality in the form similar to that usually given in questionnaires such as the ASQ and other forms of attributional questionnaires (within-outside the self) does not correlate substantially with universality and does not correlate with the negative attitude to self factor of the BDI to the same extent though it does correlate with negative attitude to self when applied to expectations of future change (Table 5vii). This is despite the fact that the wording was closer to that required by the reformulated learned helplessness theory, referring to the cause of the subject's failure to overcome the problem rather than the cause of the problem itself.

The Relationship Between Self Esteem and Causal Explanations and Expectancies

As predicted by the reformulated learned helplessness theory, a statistically significant correlation was found between negative attitude to self which is taken here as a measure of self esteem as measured by the BDI factor two, and past universality. This was not simply because of an association between depression and universality as there were no statistically significant correlations between any of the other factors of the BDI and universality. Indeed no other correlation was greater than +0.07 for either universality or expectations of others. There was in addition no statistically significant association with anxiety symptoms as measured by both the ASQI and ASQD factor one. The association was also relatively specific to internality in the sense of universality since internality in both the sense of within self-*outside* self and failure to meet one's own standards did not correlate significantly with any of the BDI factors. The only exception to this was controllability since past controllability was significantly correlated with negative attitude to self. This is discussed further below. Some evidence was therefore found of a specific association between low self esteem, as measured by BDI factor two, and universality, such that lower self esteem and a more negative attitude to self was associated with more unfavourable comparisons between themselves and their peers regarding their failures to overcome current life problems.

A number of reservations concerning this conclusion can now be advanced. First the magnitude of the association found was modest with a Pearson product moment correlation of only approximately 0.30 between universality and negative attitude to self, accounting for less than 10% of total variance. Secondly the measure of negative attitude to self, the BDI factor two, is not a validated measure of self esteem loss although the pattern of factor loadings suggests that the factor is related to the cognitive component of depression and this includes sense of failure, self blame, suicidal ideation and guilt. While these items are likely to be related to self esteem loss they are not synonymous with it. The association between universality and negative attitude to self may therefore reflect some common characteristic such as self blame or intrapunitiveness. This argument is slightly weakened by the failure to find significant associations between negative attitude to self and other forms of internality such as comparison with internal standards.

The most significant reservation, however, is that the finding of an association does not provide any evidence regarding direction of causality. The reformulated theory proposed that the self esteem loss of depression is caused by the internality of attributions concerning the subject's failure to overcome life problems. The results obtained could however just as easily be explained by the self esteem loss causing internal (personal) attributions. Loss of self esteem, it could be argued, may lead the person to compare themselves and their performance unfavourably with their peers. Longitudinal studies are required to address this question.

The Relationship Between Self Blame and Helplessness

The evidence obtained in this study suggests that there may not be a depressive paradox as suggested by Abramson and Sackeim (1977). Past controllability was found to be positively associated with negative attitude to self, not negatively associated as predicted by the depressive paradox notion. The critical difference between this and other studies is that this study examined past perceptions of controllability, ie whether there was something the person could have done to overcome the problem or whether improvement was caused by the persons actions. Other studies examined only current feelings of helplessness. Depressed subjects do therefore appear to be quite logical in both being self blaming and perceiving themselves as having control in the past.

CONCLUSION

This study provided evidence of a specific association between low self esteem, as measured by BDI factor two, and internality in the sense of the personal-universal distinction. This finding was not due to an association between depression and internality and was relatively specific to this particular sense of internality. This evidence does not however give any indication of the causal relationship between the two variables.

No evidence was found of a depressive paradox. On the contrary a positive association between past controllability and negative attitude to self was found. This result may reflect the form of the controllability question which concerned the subject's belief in the past

not current controllability of their current concerns.

CHAPTER 6

THE RELATIONSHIP BETWEEN INTERNALITY AND SELF ESTEEM: A LONGITUDINAL STUDY

In the previous chapter some evidence was found to support the proposal by Abramson et al (1978) that self-esteem loss in depression may be caused by internal attributions concerning the cause of failure to overcome current life problems. This evidence took the form of correlations between measures of negative attitude to self and attributions obtained on the same occasions. It was therefore not possible to identify the direction of any causal relations between self esteem loss and attributions.

The study reported in this chapter is longitudinal in design and involved the administration of measures of symptomatology, including self-esteem loss, and causal beliefs on two occasions separated by four months. The sample was a subset of the subjects studied in Chapter 5 to whom the original measures were readministered. The aim of the study was to examine further the relationship between self esteem loss and internal attributions and expectancies, in particular the nature of any causal relationship between these two sets of variables.

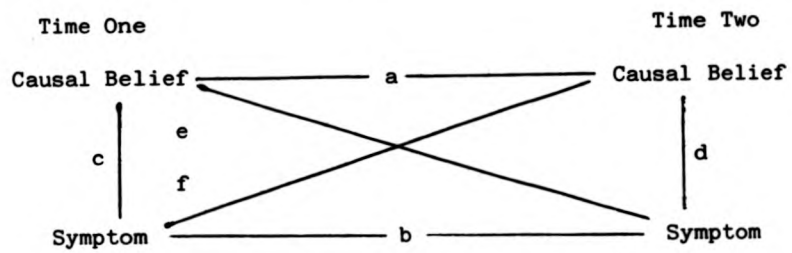
THE RELATIONSHIP BETWEEN SELF-ESTEEM LOSS AND CAUSAL BELIEFS

The hypothesis of the reformulated learned helplessness theory concerning internal attributions and loss of self esteem and relevant evidence in the literature were reviewed in Chapter 5. By using a longitudinal design it was intended to provide a more stringent test of the hypothesis. The use of this design does however raise the issues of how the correlations obtained can be interpreted.

THE INTERPRETATION OF THE PATTERN OF CORRELATIONS BETWEEN SELF ESTEEM AND CAUSAL BELIEFS

- i) The administration of the two sets of measures on two occasions generates six correlations as shown in figure 6i. These consist of a pair of auto-correlations (a and b), a pair of simultaneous

Figure 6i



correlations (c and d) and a pair of cross-lagged correlations (e and f). The auto-correlations reflect the consistency of the variables over time and are equivalent to test-retest correlations. The simultaneous correlations are cross-sectional measures of association at time one and time two and should be of similar magnitude if the relationship between the two variables is consistent across time and range in the values of the variables. The cross-lagged correlations are the correlations between causal beliefs at time one and symptoms at time two (and vice versa). If correlation e > correlation f this suggests that there is a causal relationship between causal beliefs and symptoms, the former being causally prior. The analysis of such a cross-lagged set of correlations has been described in detail by Clegg, Jackson and Wall (1977) and Kenny (1975).

- ii) The use of a cross-lagged correlation analysis does rest on a number of assumptions as noted above. These include synchronicity, which in this case is met by measuring causal beliefs and depression together at the same point in time. The stationary assumption requires that the causal influences on the variables are similar at each time of measurement. An indication of this is that the synchronous correlations are of similar magnitude. A further assumption is that the two auto-correlations do not differ significantly, that is that the two variables are equally stable. If these assumptions are met, a difference in cross-lagged correlations is suggestive of a causal relationship between the two variables. It cannot however indicate how the relationship is mediated and it therefore would still remain a possibility that this is mediated by associations between the variables and a third, causal variable.

THE AIM OF THE STUDY

The aim of this study was to answer the following questions concerning causal beliefs, symptoms and their inter-relationship.

- 1 Are the dimensions of causal beliefs, particularly internality dimensions, examined in the previous study consistent characteristics of the subjects over a four month test-retest interval?
- 2 Do the causal beliefs change in parallel with changes in symptomatology or are they relatively stable characteristics?

3 Is there evidence from a cross-lagged correlation analysis that internality is causally related to change in self-esteem?

METHOD

Procedure

Subjects completed the following questionnaires individually on two occasions separated by an interval of approximately 16 weeks(+ 2 weeks):

- 1 The Beck Depression Inventory (BDI)
- 2 Anxiety Symptoms Questionnaire: Intensity (ASQI)
- 3 Anxiety Symptoms Questionnaire: Frequency (ASQF)
- 4 Anxiety Symptoms Questionnaire: Duration (ASQD)
- 5 Causal Beliefs and Expectancies Questionnaire (CBEQ)

Subjects

The subjects were 26 of the 46 patients included in the first part of the study described in Chapter 5 who were willing and available to complete again the questionnaire measures which they had originally filled in as part of that study. Subject characteristics are included in the results below. Of the 20 subjects lost between initial and repeat assessment, 10 had dropped out of treatment and lost contact with the author, 7 were not able to be seen again at the desired time interval from original assessment, 2 refused on the second occasion and one was unable to complete all the questionnaires due to her emotional state on the second occasion.

Between assessment occasions patients received behavioural psychotherapy from the author. This took the form of a relatively brief and behaviourally orientated approach. Attributional models and reference to the causal belief questionnaires were avoided during therapy.

The same questionnaires utilising the same current concerns and life problems were administered on each occasion. The Symptoms and Current Concerns Interview was not repeated at time two. All measures are described in detail in Chapters 4 and 5. The symptoms and current concerns remained relevant for each subject as evidenced by their response to item 4 on the CBEQ concerning the importance of each concern. All concerns were rated at least moderately important (future) on both testing occasions. This criteria lead to the loss of one current concern from two subjects.

RESULTS

1 Subject Characteristics

Table 6i gives the characteristics of the subjects included in this study and compares them with those subjects who completed questionnaires at time one but not time two. The only significant difference between the groups was in mean age, the "drop-outs" being significantly younger than those included in this study.

2 Consistency of Causal Beliefs

Test-retest correlations for each dimension are given in table 6ii. The values varied from zero to 0.73. Higher values were found for internality (past and future), expectations of others (past and future) and universality (future) suggesting that these dimensions were rated quite consistently over this time interval (all values of $r > 0.50$) despite changes in life problems rated. The lowest correlations were for the "controllability", "expectations of self" and "failure to meet one's own expectations" dimensions. These also had lower internal consistency values than the internality and universality dimensions (see Chapter 5) raising questions about their reliability. The relatively low test-retest correlation for past universality may be at least in part related to a significant change in this dimension between testing occasions rather than the measure being of low reliability. No such change was found for internality (past or future) or future universality.

Table 6ii also gives means and standard deviations for each dimension at the two testing occasions. Only three variables change significantly between the two occasions. Past universality and past failure to meet one's own expectations both changed significantly in the direction of greater externality while past controllability changed in the direction of greater control. This latter finding is perhaps not surprising in view of a significant decrease in ratings of the life problems severity (as measured by question one of the questionnaire) (average rating time one: 0.69; time two: 1.51; $t(\text{paired samples})=4.79$, $df=25$, $p < 0.001$).

Table 6iii shows the parallel results for the symptom factors. As can

Table 6i Subject Characteristics: Comparison of Completers and Non-Completers

	Completers (N=26)	Non-Completers (N=20)	Significance of difference between groups
Sex: male female	8 18	8 12	$\chi^2 = 0.39$ df=1, $p > 0.1$
Age: mean sd	38.58 8.95	31.21 7.37	t=3.06 df:44, $p < 0.01$
Marital Status: single married divorced widowed	2 21 2 1	5 15 0 0	$\chi^2 = 0.220$ df=1, $p > 0.1$ (single, divorced and widowed combined)
Social Class: I & II III IV V	5 14 5 2	6 11 3 0	
Employment Status: full-time part-time not employed	17 2 7	10 4 6	$\chi^2 = 0.05$ df=1, $p > 0.1$ (full/part time combined)
Duration of Mean: Illness (median) SD (range)	2.81 (1.5) 3.27 (0.33-14.0)	2.55 (1.83) 2.33 (0.5-9.0)	Mann-Whitney U=234 z=0.67 $p > 0.1$
BDI Total Score: mean (time one) SD	17.65 5.45	19.68 5.60	t=1.23 df:44, $p > 0.1$

Table 6ii Comparison of Causal Beliefs Made at Time One and Time Two

	Mean (SD) at Time One	Mean (SD) at Time Two	Significance of difference (t-test) ¹ (df 25)	Correlation between scores at T1 and T2 (r)
Past Internality (self cause of failure)	2.72 (0.90)	2.61 (0.70)	t= 0.76	0.63***
Past Universality	6.27 (1.00)	5.58 (0.98)	t= 3.17**	0.36
Past Failure to meet own Standards	6.98 (1.03)	6.13 (0.12)	t= 3.38**	0.16
Past Controllability	1.66 (0.86)	2.12 (0.84)	t=-2.13*	0.17
Past Belief About Others	2.00 (1.01)	2.08 (0.86)	t=-0.54	0.73***
Past Expectation of Self	2.69 (0.87)	2.67 (0.61)	t= 0.13	0.003
Future Internality (self cause of change)	2.57 (0.86)	2.43 (0.71)	t= 1.07	0.65***
Future Universality	5.23 (1.18)	5.18 (1.03)	t= 0.26	0.54**
Future Expected Failure To Meet Own Standards	5.59 (0.78)	5.42 (0.54)	t=-1.11	0.29
Future Controllability	1.88 (0.89)	2.21 (0.84)	t=-1.57	0.20
Future Expectations of Others	2.12 (0.96)	2.38 (0.95)	t=-1.91	0.73***
Future Expectations of Self	2.45 (0.83)	2.66 (0.83)	t=-0.98	0.14
Expectations of Future Change (amount)	2.58 (0.93)	2.58 (1.00)	t=-0.02	0.60***
Expectations of Future Change (likelihood)	1.91 (0.70)	1.92 (0.81)	t=-0.05	0.36

¹t-test for paired samples, degrees of freedom in brackets

Table 6iii Comparison of Symptom Factors at Time One and Time Two

Symptom Factor	Time One Mean (SD)	Time Two Mean (SD)	t-test (paired samples) (2-tailed test, 25df)	Correlation Between T1, T2 (Pearson Product moment correlation)
BDI Factor One	-0.16 (0.67)	-0.26 (0.68)	t= 0.78	0.51**
BDI Factor Two	-0.02 (0.81)	-0.34 (0.73)	t= 2.14*	0.49**
BDI Factor Three	-0.15 (0.63)	-0.08 (0.48)	t=-0.60	0.38
BDI Factor Four	-0.01 (0.55)	-0.28 (0.77)	t= 2.14*	0.55**
BDI Total Score	18.08 (5.64)	14.19 (7.17)	t= 2.92**	0.46*
ASQI Factor One	0.32 (0.83)	-0.49 (2.07)	t= 1.97	0.16

* p < 0.05

** p < 0.01

be seen there was a highly significant decrease in mean BDI total score, significant decreases in BDI Factor 2, negative attitude to self and factor 4 and a marginal, non significant, decrease in the anxiety symptom factor (ASQI factor one). It therefore appears that symptoms of depression, particularly negative attitude to self, decreased between the two occasions.

These findings therefore provided inconclusive evidence regarding the stability of the causal belief ratings over time. The evidence suggested that past and future internality (self cause of failure) and past and future beliefs about others are relatively stable. However their modest reliabilities and the relatively small absolute changes in symptom scores meant that this conclusion must be a tentative one. The past and future controllability dimensions both had low test-retest correlations and low internal consistency (as reported in Chapter 5) suggesting that they may be both unstable and situation-dependent. Past universality, one of the most interesting dimensions in view of the findings reported in Chapter 5, yielded a low test-retest correlation and a significant change between testing occasions. This may however be due to the ways this item was constructed (ie as the difference between item one "how much has this problem decreased?" and item three "how much would other people have reduced this problem?"). The past belief about others item did not change between testing occasions and yielded a relatively high test-retest correlation of 0.73. The change in universality is therefore likely to be due entirely to the change in item one, decrease in problem and may not be a reliable change.

Cross-lagged Correlation Analysis

Synchronous correlations between causal beliefs and BDI Factor 2, negative attitude to self, are presented in table 6iv. As would be expected Time One results are similar to those obtained in Chapter 5 with the original 46 subjects although because of the smaller sample size some failed to achieve statistical significance in this population. At Time Two the results are similar for past universality (although just failing to achieve statistical significance) but much smaller for controllability indicating that this relationship may not be stable across time.

Cross-lagged correlations are given in table 6v. No significant

Table 6iv

Synchronous Correlations Between Causal Beliefs and BDI Factor 2, Negative Attitude to Self

Causal Beliefs	Correlation with BDI Factor 2 at T1 (N=26)	Correlation with BDI Factor 2 at T2 (N=26)
Past Internality (self cause of failure)	0.11	0.16
Past Universality	0.41*	0.35
Past Failure to Meet Own Internal Standards	0.00	0.34
Past Controllability	0.40*	0.15
Future Internality (change depends on self)	0.30	0.25
Future Universality	0.20	0.24
Future Expected Failure to Meet Own Internal Standards	-0.14	0.29
Future Controllability	0.25	0.00
Future Expectations (amount)	0.06	-0.15
Future Expectations (likelihood)	-0.03	0.35

* $p < 0.05$

Table 6v

Pearson-Filon Comparison of Cross-lagged Correlations

Between Measures of Causal Beliefs and BDI

Factor Two (Negative Attitude to Self)

	Cross-lagged Correlation Causal Belief T1 - BDI F2/T2	Cross-lagged Correlation BDI F2/T1 - Causal Belief T2	Significance of difference between coefficient (z)
Past Internality (within-outside self)	-0.01	-0.11	z= 0.510
Past Internality (personal-universal)	0.34	0.06	z= 1.21
Past Internality (failure to meet internal norms)	0.00	0.15	z= 0.57
Past Controllability	0.11	0.38	z= 1.131
Future Internality (within-outside self)	0.11	0.32	z= 0.91
Future Internality (personal-universal)	0.38	0.15	z= 1.05
Future Internality (failure to meet own internal norms)	0.20	0.22	z= 0.08
Future Controllability	0.16	0.18	z= 0.06
Future Expectations (amount)	-0.22	0.23	z= 1.91
Future Expectations (likelihood)	-0.16	0.51	z= 3.19**

* p 0.05

** p 0.01

differences between cross-lagged correlations were found for the internality dimension. The only significant difference was for future expectations (likelihood) although this may have been a chance finding given the number of correlations computed. There was therefore no evidence to suggest that causal beliefs are causally related to negative attitude to self.

DISCUSSION

1 The Consistency and Stability of Causal Beliefs Over Time

The evidence obtained in this study suggested that some dimensions are relatively stable over a four month time interval and a modest change in symptomatology. However the test-retest correlations obtained were in general modest or small. Higher values were obtained for past and future belief about others, past and future internality (self the cause of failure), future internality (personal-universal distinction) and expectations of future change (range 0.54 to 0.73), comparable to those obtained by Peterson et al, 1982, for the ASQ). Low values (less than 0.50) were obtained for past internality (personal-universal distinction), past and future failure to meet one's own standards and past and future controllability. There is little comparable data available in the literature for real life problems although Firth and Brewin (note 1) in their small scale longitudinal study found test-retest correlations of -0.12 for uncontrollability and 0.23 for internality (but 0.74 for stability and 0.87 for globality).

It is therefore difficult to draw any firm conclusions regarding the temporal stability of causal beliefs measured in this study. The evidence overall suggests that the internality dimensions (self causes of failure and internality, personal-universal distinction) are rated moderately consistently across the time interval and range of depression examined in this study for both causal attributions and expectations. By contrast controllability and internality (comparison with one's own standards) were not consistently rated. In the case of controllability ratings this may be due in part at least to a change in the life problems between testing occasions. The internal consistency coefficient for both dimensions were also low suggesting that the dimensions are either rated unreliably or reflect situational

differences more than individual differences.

2 The Relationship Between Causal Beliefs and Symptomatology

In Chapter 5 a specific association between internality (personal-universal distinction) and negative attitude to self was found. In this study the association was found to be stable over time (ie similar at both time one and time two testings). The cross-lagged correlation analysis did not provide any strong evidence that a causal relationship exists between these two variables although there was a slight trend in the predicted direction. This negative result might be attributable to the questionable reliability of the internality (personal-universal distinction) measure. However inspection of the cross-lagged correlations for the more reliable past "belief about other" measure provided no evidence of a causal relationship (correlation between past belief about others/T1 and BDI Factor 2/T2: 0.40, $p < 0.05$; correlation between BDI Factor 2/T1 and past belief about others /T2 : 0.38, $p=0.056$).

There was therefore no evidence of a causal relationship between internality and self esteem. The failure to find evidence of a causal relationship may reflect the time interval chosen between testing occasions and the relatively modest change in symptomatology between testing occasions. Other studies (eg Firth and Brewin, 1982; Golin et al, 1981) chose 4 to 6 week intervals between testing occasions. However only Firth and Brewin (1982) used real life events and symptoms and they found evidence of a causal relationship for stability and controllability but not internality.

CONCLUSION

This longitudinal study suggested that internality (universal-personal distinction) is associated with low self esteem, as predicted by the reformulated learned helplessness theory. However no evidence was found of a causal relationship between these two variables. The results were compatible with the hypothesis that internality is a function of low self esteem (ie state dependent) although no very firm conclusions could be drawn with regard to this.

THE RELATIONSHIP BETWEEN DEPRESSION, PRESENTING SYMPTOM TYPE AND CAUSAL ATTRIBUTIONS AND EXPECTANCIES CONCERNING SYMPTOMS

The literature reviewed and studies reported above have focussed on the relationship between symptoms and causal beliefs concerning life problems. While studies have lent some support to aspects of the theory, both the results reported in the literature and the results reported earlier have been generally disappointing, particularly with respect to attempts to demonstrate that attributions play a causal role in the aetiology and maintenance of depression. Brewin (1985) noted in the conclusion of his review that "future research needs to examine ... the relative importance of attributions for events and attributions for depressive symptoms themselves". It may therefore be that part of this failure is due to focussing on the wrong kind of attribution and that attributions for symptoms may prove more important. The possibility that attributions, and expectancies, concerning symptoms themselves play an important role, particularly in the maintenance of depression has been suggested by Teasdale (1985). He writes that "anybody who experienced the highly aversive symptoms and effects of depression, who saw these as evidence of personal inadequacy, and who felt quite hopeless that their situation would improve, either through their own efforts or otherwise, would experience depression about depression". While not phrased in explicitly attributional terms, this proposal suggests that internal, especially characterological, attributions concerning the cause of depressive symptoms may play a role in the maintenance of depression. These ideas had also been put forward earlier by Beck as part of his broad cognitive theory of depression (eg Beck 1976) in which he suggests that the depressive interprets his symptoms in a negative way, concluding that he is defective and leading to a vicious circle maintaining and intensifying his depression. These observations are supported by clinical experience which suggests that depressed patients frequently attribute their depression symptoms to their own failings and may fail to identify them as either part of depression at all (eg loss of interest in work may be interpreted as laziness) or may not be linked to life problems or losses ("I should be over that by now).

Patients' causal beliefs and expectations concerning their symptoms have been considered in a different context by Caine, Wijesinghe and Winter (1981). They examined a number of related themes including staff and patient treatment expectancies, patients' complaints of psychological distress and how this relates to measures of psychological functioning. Of particular relevance here is their proposal that the type of complaint presented by the patient is related to the patient's treatment expectancies. Basically they differentiated those patients who present with relatively diffuse, mainly emotional and interpersonal difficulties from those who present with more specific neurotic symptoms (eg phobic, obsessional, somatic symptoms etc). They propose that the former have a psychological treatment set and construe their problem in psychological terms while the latter have a medical/physical treatment set and construe their problem in more medical/physical terms. They present other data to suggest that these different treatment sets are associated with broad aspects of personal functioning such as "openness to inner experiences". This body of work is of interest in the context of patient's causal beliefs concerning symptoms because it has involved a detailed and extensive examination of how patients present their symptoms and how this relates to their beliefs concerning their symptoms and treatment. The distinction between psychological and medical/physical construction and treatment expectancies in relation to symptoms is of particular relevance to Beck's and Teasdale's proposals. Although Caine et al do not relate their distinction to diagnostic groups (indeed they vigorously question the value of psychiatric diagnosis), their two groups of symptom presenters appear to differentiate those who present with more depressive symptoms (eg feeling inadequate and inferior in relation to others, being over-critical of others, feeling depressed and pessimistic etc) and those with anxiety based symptoms (eg feeling tense, nervous, panic attacks, obsessive thinking, compulsions, phobias and somatic complaints, including feeling faint and dizzy, sweating etc). Could it be that depressed patients construe their symptoms in more psychological terms, hold themselves, particularly their personal inadequacies, more responsible for their symptoms and expect that change depends more on their own action rather than medical treatment. This latter suggestion might appear to conflict with Teasdale's proposal but this is not necessarily so. Depressed patients may believe future change in their symptoms depends more on themselves but have low self-efficacy expectancies. This may be an even more depressing set of expectancies than to believe future change depends on medical treatment and that there is little that the person himself can do to bring about change.

To return to an attributional analysis, it may be hypothesised from these discussions that depressed, compared with anxious patients, attribute the cause of their symptoms more to internal causes, particularly their own personal inadequacies, while anxious patients attribute the cause of their symptoms more to external causes, particularly a medical or physical problem. This may be associated with more internal expectancies for change in the depressed patients compared with the anxious patients. This pattern of attributions and expectancies may, as suggested by Teasdale, have a maintaining and/or intensifying effect in the case of depressive symptoms. It should be noted that internal and external are used here in a particular sense, in the sense of personal versus impersonal forces. Medical causes lie physically but not psychologically within the person. This distinction remains close to that of Heider (1958) and indeed to the concept of universality since medical causes might reasonably be regarded as "a difficult situation" which would tend to affect most people.

To summarise, Beck's and Teasdale's proposals regarding "depression about depression" and Caine et al's work on personal styles in neuroses lead to a number of distinct but related hypotheses. Teasdale's and Beck's work suggests that depression may be maintained and exacerbated by the patients' attributions and expectations concerning his depressive symptoms. It follows from this that more severe and prolonged episodes of depression may be associated with attributing symptoms to internal characterological causes to a greater extent, and with low expectations of change in symptoms to a greater extent.

Caine et al's work leads to the proposal that patients whose presenting complaints are diffuse and emotional, rather than specific and neurotic, will have a more psychological orientation to their symptoms. It may be hypothesised that this would lead patients to attribute the cause of their symptoms more to their actions, personal characteristics and life problems and less to physical-medical problems. They should also expect future change to depend more on changes in themselves and less on medical treatment.

AIM OF THE STUDY

The aim of this study was to examine a number of questions arising from the above discussion. These can be summarised as follows:

- 1 Is the severity of depressive symptoms related to causal beliefs and future expectations concerning their symptoms?

In particular is the severity of depressive symptoms related to attributing the cause of symptoms more to characterological causes?

Is depression severity also related to the extent to which the subject holds themselves responsible for their symptoms?

Finally is depression severity related to both future expectations of improvement in symptoms and future expectation of the subject's ability to bring about change in their symptoms by their actions?

- 2 Does the type of presenting symptoms (specific neurotic symptoms vs diffuse emotional symptoms) relate to causal beliefs about symptoms?

In particular do patients who present with diffuse emotional symptoms attribute the causes of their symptoms more to psychological (compared with medical) causes, to their own personality or behaviour and to life problems?

Do they hold themselves more responsible for both the causes of their symptoms and future change?

Do they expect future change to depend more on their own actions and less on medical treatments?

- 3 What is the relationship between type of presenting symptom and symptomatology?

In particular are diffuse emotional symptom presenters relatively more depressed and specific neurotic symptom presenters relatively more anxious?

METHOD

Subjects

The subjects were 52 psychiatric out-patients and day-patients who were all either receiving behavioural psychotherapy from a clinical psychologist or attending a day clinic for the behavioural treatment of neurotic disorders. Inclusion and exclusion criterion were identical to

those given in Chapter 5 except that the age range was reduced slightly to between 18 and 55. Subjects were however at varying stages of treatment rather than all at the beginning of treatment as in the earlier study.

Materials and Procedure

The following measures were administered to each subject individually on a single occasion in the order given below. The measures took approximately 30-45 minutes to complete.

- 1 Attitude to Symptom Questionnaire (ASQ)
- 2 Beck Depression Inventory (BDI)
- 3 Anxiety Symptom Questionnaire: Intensity (ASQI)

The BDI and ASQI have been described in earlier chapters. The other measure is described in detail below.

- 1 Attitude to Symptom Questionnaire (ASQ) (Appendix L)

This self-administered questionnaire consisted of thirteen items concerning subjects' beliefs and attitudes regarding their presenting symptoms. The questionnaire begins with two general items concerning the nature of the patient's main symptoms or emotional problems and how distressing they have been during the past two weeks.

Questions (3) to (13) concern various aspects of the patient's beliefs about these symptoms or problems. Each is presented in the form of a five point rating scale (scored 0-4), each point being defined by a phrase. The items cover:

- (3) the extent to which life problems are believed to be a cause of the symptoms;
- (4) the extent to which the subject holds themselves responsible for their symptoms;
- (5) the extent to which the subject's personality is believed to be a cause of the symptoms;

- (6) the extent to which a physical/medical problem or a psychological emotional problem is believed to be the cause of the symptoms;
- (7) the extent to which the subject's past actions are believed to be a cause of the symptoms;
- (8) the extent to which, the subject believes that, compared with other people, they have done something to improve their symptoms;
- (9) the extent to which the subject holds themselves responsible for improving their main symptom;
- (10) the extent to which the subject believes that improvement in their symptoms depends on physical medical treatment;
- (11) the extent to which the subject believes that improvement in their symptoms depends on their own actions;
- (12) the extent to which the subject expects their symptoms to improve in the foreseeable future;
- (13) the extent to which the subject expects to improve their symptoms by their actions.

Classification of Subjects into Presenting Type Categories

Subjects were categorised as diffuse, emotional presenters or specific neurotic presenters on the basis of their response to question one of the Attitude to Symptoms Questionnaire. Detailed criteria are given in appendix M, based on those given by Caine et al (1981). To establish the reliability of this categorisation, it was carried out independently by the author and two psychology graduates, all of whom used only the single item to make their judgement. Inter-rater agreements were 79%, 81% and 83% yielding Kappa's of 0.58, 0.62 and 0.66 respectively. (Cohen, 1960). These relatively modest values may reflect the limited data on which the categories were made as case note data was not utilised.

RESULTS

Subject Characteristics

Characteristics of the subjects are given in table 7i. These are similar to the subject populations reported in Chapter 5 with a preponderance of married and female subjects, mean age in the mid thirties and belonging to social class two and three. Only one quarter were in full time

Table 7i Subject Characteristics

Sex: Male 20
Female 32

Age: mean 35.33 standard deviation 8.42

Marital Status: Single 12
Married 36
Divorced/Widowed 4

Employment Status: Full time employment 14
Part time employment 11
Not in employment outside home 13
Unemployed 14

Social Class: I and II 21
III 18
IV 7
v 2

Duration of Current Psychiatric Disorder: median 3.0 years
range 3 months - 39 years

BDI Total Score: mean 20.23 standard deviation 9.71

employment with approximately a quarter each in part-time employment, unemployed and not seeking employment (eg housewife). Mean duration of psychiatric illness was 5 years but the distribution was positively skewed, the median value being 3 years.

The Relationship Between Type of Symptom Presenter and Subject Characteristics

The relevant data is summarised in table 7ii. No significant differences were found between the two presenter types in sex distribution ($\chi^2=1.13$, 1df $p>0.1$), age ($t=0.08$, $p>0.1$), marital status (collapsing single and widowed/divorced categories, $\chi^2=0.43$, 1df $p>0.1$), employment status ($\chi^2=0.91$ 3df $p>0.1$) social class ($\chi^2=0.31$, 2df, $p>0.1$, social class IV and V collapsed) or duration of psychiatric disorder (Mann-Whitney U Test, $U=293.0$, $p>0.1$).

Relationship Between Symptoms of Depression and Causal Beliefs Concerning Symptoms

Pearson's product-moment correlations between measures of symptomatology (factors derived from the BDI and ASQI) and causal beliefs are given in table 7iii. The results are based on the total subject sample including both groups of presenter types.

Contrary to predictions derived from Beck's and Teasdale's proposals, depression severity, as measured by BDI total scores, was not significantly correlated with attributions to internal characterological causes although it was correlated with ratings of personal responsibility for the cause. Attributions to behavioural causes were also not significantly correlated with depression severity although in this case the correlation only just fell short of statistical significance ($p=0.065$). However in support of Beck's and Teasdale's proposals, substantial, highly statistically significant correlations, were obtained between depression severity and both measures of expectations of future change.

Inspection of the correlations between causal beliefs and the individual symptom factors revealed an interesting pattern. BDI factor two, "negative attitude to self", correlated strongly with responsibility for symptoms and with attributions to internal characterological causes and

**Table 7ii The Relationship Between Subject Characteristics,
and Type of Symptom Presenter**

	Emotional Symptom Presenters (N=23)	Neurotic Symptom Presenters (N=29)
Sex: male	7	13
female	16	16
Age: mean	35.21	35.41
sd	8.95	(7.72)
Marital Status:		
single	4	8
married	17	19
Widowed/divorced	2	2
Social Class:		
I & II	11	10
III	8	10
IV	4	3
V	0	2
Employment Status:		
full-time	6	8
part-time	6	5
not employed	6	7
unemployed	5	9
Duration of Psychiatric Disorder:		
median	3.0 y	3.0 y
range:	0.5-12 y	0.25-39 y

Table 7.iii Relationship Between Symptoms and Causal Beliefs Concerning Symptoms
(Pearson Product-moment correlations)

Attitude to Symptom Factors	Symptom Factors							
	EHI Factor One	EHI Factor Two	EHI Factor Three	EHI Factor Four	EHI Total Score	ASQI Factor One		
Caused by life problems	0.19	0.27	0.11	0.03	0.16	0.01		
Caused by own personality	0.04	0.49***	-0.04	0.17	0.26	-0.02		
Caused by psychological vs medical problem	0.28*	0.49***	0.01	0.23	0.38***	0.17		
Caused by own actions	0.13	0.22	0.22	0.05	0.26	0.09		
Responsibility for symptoms	0.07	0.50***	0.06	0.20	0.32*	0.04		
Universality of failure to improve symptoms	-0.16	-0.04	0.16	-0.23	-0.22	0.02		
Future change depends on medical treatment	-0.17	-0.07	-0.10	-0.06	-0.21	-0.24		
Future change depends on own actions	0.05	0.39**	-0.17	0.04	0.20	0.04		
Responsibility for future change	0.18	0.31*	-0.05	0.0	0.17	-0.13		
Expectation of future change	-0.54***	-0.37**	0.17	-0.17	-0.49***	-0.04		
Expectation of change through own actions	-0.26	-0.23	0.10	-0.30	-0.41**	-0.15		

* p < 0.05
 ** p < 0.01
 *** p < 0.001

psychological causes ($r = 0.48-0.50, p < 0.01$). No other symptom factor correlated with any of these items apart from factor one with one relatively small significant correlation suggesting that attributing the cause of symptoms to internal, psychological and, in particular, characterological causes is relatively specifically associated with negative attitude to self or low self esteem.

In contrast, for the future expectancy ratings, significant correlations were found with BDI factors one and two and BDI total score, suggesting that low expectancies of change in symptoms are less closely related to any specific component of depression.

Relationship Between Type of Presenting Symptom and Causal Beliefs

Mean values for each scale for the two groups, specific neurotic and diffuse emotional symptom presenters is presented in table 7iv. As predicted from Caine et al's work emotional symptom presenters compared with neurotic symptom presenters attributed the cause of their symptoms significantly more to their personality, to psychological as against medical problems, and non significantly to their own actions ($p=0.052$). They also held themselves more responsible for their symptoms but they did not attribute the cause of their symptoms more to life problems. The results were less clear for expectations concerning future change. Emotional symptoms presenters held themselves significantly more responsible for future change and there was a slight non-significant trend ($0.1 > p > 0.05$) for emotional symptom presenters to expect future change to depend more on their own actions. No differences or trends were however found for expectations that future change depends on medical treatment or generalised expectancies regarding future change.

The Relationship Between Presenting Symptom Type and Elicited Symptomatology

The data for each of the symptom factor scores for the two presenting symptom types is presented in table 7v. There was a highly significant difference in depression severity, as measured by BDI total score. Inspection of the differences for the BDI factors suggest that this is not due entirely to any one component of depression but is most strongly related to factor two, negative attitude to self. No significant difference in anxiety symptoms was found. Evidence was therefore found

Table 7iv Relationship Between Type of Presenting Symptoms and Causal Belief

Attitude to Symptom Items	Specific Neurotic Symptom Presenters (N=29) Mean (SD)	Diffuse Emotional Symptom Presenters (N=23) Mean (SD)	Significance of Difference (2-tailed t-test)
Caused by life problems	2.29 (1.33)	2.83 (0.98)	t= 1.62
Caused by own personality	1.76 (1.12)	2.70 (1.06)	t=-3.06**
Caused by psychological vs medical problem	2.83 (0.71)	3.43 (0.73)	t=-3.03**
Caused by own actions	1.69 (1.23)	2.43 (1.47)	t= 1.99 (p=0.052)
Responsibility for symptoms	1.90 (1.11)	2.61 (0.94)	t=-2.45**
Universality of failure to improve symptoms	2.45 (1.18)	2.09 (1.15)	t= 1.08
Future change depends on medical treatment	2.17 (1.04)	2.36 (1.26)	t= 0.60
Future change depends on own actions	2.45 (1.18)	2.96 (1.11)	t= 1.78
Responsibility for future change	2.55 (0.87)	3.05 (0.72)	t=-2.16*
Expectation of future change	2.07 (1.03)	1.64 (1.26)	t= 1.35
Expectation of change through own actions	2.50 (1.11)	2.00 (1.10)	t= 1.57

Hotellings' $T^2 = 28.66, p=0.056$

* $p \leq 0.05$ ** $p \leq 0.01$

Table 7v Symptom Factor Scores of the Two Presenting Symptom Types

Symptom Factors	Specific Neurotic Symptoms Presenters (N=29)		Diffuse Emotional Symptom Presenters (N=23)		Significance of Difference (t-test 2-tailed)
	mean	(SD)	mean	(SD)	
BDI Factor One	-0.25	(0.76)	0.22	(0.85)	t=-2.07*
BDI Factor Two	-0.37	(0.75)	0.34	(0.90)	t=-3.07**
BDI Factor Three	0.05	(0.60)	0.10	(0.83)	t=-0.23
BDI Factor Four	-0.15	(0.65)	0.28	(0.66)	t=-2.36*
BDI Total Score	16.10	(8.67)	25.43	(8.48)	t=-3.90***
ASQI Factor One	-0.06	(0.80)	0.03	(0.70)	t=-0.44

that the emotional symptom presenters report more depressive symptoms, particularly negative attitude to self, but not that the specific neurotic symptom presenters report more anxiety symptoms.

In this context the relationship between causal beliefs concerning symptoms and reported symptomatology is relevant. Table 7iii shows that most of the significant correlations between symptom factor scores and psychological attitudes to symptoms are with BDI factor two, negative attitude to self. Significant correlations were found with all relevant items except for attribution of symptoms to behavioural causes, and the correlation with attributions to life problems, which was marginally non significant ($p=0.055$). Only one significant correlation involved another BDI factor. This evidence therefore suggests that a psychological attitude towards symptoms is associated with a relatively negative attitude towards oneself but not consistently with other aspects of depression and particularly not with anxiety symptoms.

DISCUSSION

The results of this study provided some support for both Teasdale's (1985) and Caine et al's (1981) proposals regarding the relationship between depression, presenting symptom type and causal beliefs concerning symptoms. Depression severity was found to be quite strongly correlated with pessimism regarding future improvement in symptoms and regarding the subject's own ability to change their symptoms through their actions (self-efficacy expectations). Negative attitude to self was found to be specifically correlated with attributions to characterological and psychological causes for which they held themselves responsible. This finding paralleled in some respects that obtained in Chapter 5 where negative attitude to self was found to be associated with internal, personal attributions concerning the cause of failure to overcome current concerns.

Diffuse emotional symptom presenters differed from specific neurotic symptom presenters on a number of aspects of their beliefs about their main presenting symptom. Emotional presenters attributed the cause more to psychological causes, particularly dispositional causes and to a lesser extent their own actions. They also held themselves more responsible for future change with a trend towards expecting future change to depend on their actions. They did not however differ from

neurotic symptom presenters in expectations of future change or in the belief that future change depends on medical treatment. This latter negative finding is somewhat surprising in view of Caine et al's work and the highly significant group difference for psychological vs medical causal beliefs. It may be that other factors, such as previous experience of the effect of medical treatments, may be more important factors in determining such expectancies than causal explanations concerning the symptoms.

The relationship between type of presenting symptom and depression, in this population, is a rather complex one. The two types of presenting symptom differ in terms of depression severity and in three of the four depression symptom factors derived from the BDI. However the pattern of results for the attribution and expectancy questionnaires suggest that the distinction is not simply between more and less depressed subjects. Depression severity correlated most substantially with expectation of change measures (overall expectation of future change and expectation of change through their actions) and attributing the cause of their symptoms to psychological (vs medical) causes. By contrast both type of presenting symptom and negative attitude to self (BDI factor two) were most closely associated with attributing symptoms to psychological causes and to their own personality and holding themselves responsible for their symptoms.

CHAPTER 8

OVERVIEW AND CONCLUSIONS

The attributional reformulation of the learned helplessness theory is essentially a theory of the aetiology of some clinical depressions (see Chapter I). However most studies reported in the literature have been concerned with a relatively peripheral and non essential aspect of the theory, the depression-prone attributional style. The studies reported in Chapter 3, 5 and 6 have attempted to examine the core of the reformulated learned helplessness theory, the aetiological hypothesis. The results of these studies can now be summarised before considering criticisms of the theory and the studies reported here.

A cross sectional study comparing the attributions and expectancies concerning current life concerns of depressed, anxious patients with those of non-depressed, anxious patients yielded some though limited support for the aetiological hypothesis. Subjects who gave predominantly internal or global attributions for the cause of their current concerns were significantly more likely to be depressed than the patient population as a whole. Therefore, as predicted by the theory, there was a conditional relationship, revealed by Bayesian methods of analysis, between internal and global attributions and depression. However although there were trends in the expected direction, there were no significant differences between depressed and non-depressed patients in the internality or globality of their attributions. For stability the findings emphasised the need for appropriate clinical control groups. Both depressed and non-depressed patients gave predominantly stable attributions for the cause of their current concerns but there were no trends or significant group differences.

Less direct support for the aetiological hypothesis came from the finding that both patient populations gave predominantly uncontrollable attributions for the cause of their current concerns but that depressed subjects did this to a significantly greater extent than non-depressed.

Finally some support was also obtained from examination of future expectancies. Depressed subjects gave significantly lower expectations

of change (likelihood of change in the expected cause of future change) than did the non-depressed subjects. Further, subjects who gave predominantly low expectations of future change were significantly more likely to be categorised as depressed than the population as a whole. However results for the controllability of future change did not yield any significant differences although there were trends in the predicted direction.

Evidence of a specific relationship between internal attributions and low self esteem, as predicted by the theory, was found in a further study of the association between attributions and depression. It was found that internal attributions concerning the cause of the subject's failure to overcome current concerns were associated with negative attitude to self as measured by the second factor of a factor analysis of the Beck Depression Inventory (BDI). This result was specific to internality in the sense of the universal-personal distinction and was specific to this particular factor of the BDI, no significant correlations being found between internality and other factors or BDI total score. Similar results were also obtained for the internality of expected future change.

A subsequent longitudinal study did not however provide any significant evidence of a causal relationship between internality and low self esteem (or negative attitude to self). The cross lagged correlations between internality at time one and self esteem (as measured by BDI factor two) at time two were not significantly different from the correlations between self esteem at time one and internality at time two, although there was a slight trend in the predicted direction.

Overall some relatively modest evidence was obtained of associations between attributions and depression. No evidence was found to suggest that this relationship is a causal one, at least between low self esteem and internal attributions for the cause of failure to overcome current concerns.

Having summarised the rather limited evidence obtained in support of the reformulated learned helplessness theory, it may be helpful to consider some of the problems which arise from these and other attempts to examine the theory. These can be broadly categorised into problems arising from the nature of the theory itself, problems of subject selection and symptom measurement and problems with the measurement of attributions and expectancies.

PROBLEMS IN TESTING THE REFORMULATED LEARNED HELPLESSNESS THEORY

Problems Arising from the Nature of the Theory

The reformulated learned helplessness theory as proposed by Abramson et al (1978) is basically a theory of the aetiology of depression. Although many studies and reviews have focussed subsequently on other aspects of the theory (eg Peterson and Seligman, 1984, on vulnerability to depression and Brewin, 1985, on recovery from depression amongst other aspects), these are peripheral to the original theory and merited only a brief note in the original paper.

The aetiological or developmental theory is particularly difficult to test adequately, which may at least in part explain the limited attempts to examine it directly. The theory concerns the relationship between attributions and expectancies arising from attempts by a non-depressed person to modify an expected aversive outcome and subsequent aspects of depression (self esteem loss and the stability and generality of motivational deficits). It is therefore important to measure attributions and expectancies before the onset of depression and after the expected aversive outcome arises. Measuring both depression and cognitions simultaneously after a variable length of time from the onset of depression cannot differentiate the effect of attributions and expectancies on depression from the effect of depression on attributions (ie the symptom model to use Brewin's (1985) terminology). However it is in practice very difficult to measure attributions before the onset of depression. At best attributions following major life events (eg child birth, exam failure, unemployment) could be measured but in these cases subjects are likely to be already becoming depressed, making it difficult to disentangle fully cognitions and depression. Many clinical depressions do not clearly follow from a single life event but may be related to a number of stresses and ongoing difficulties such as marital problems or problems in coping at work. In addition a relatively mild depression may be made much worse by a major life stress further complicating the relationship between life events and depression (eg Brown and Harris, 1978). In summary it is in practice difficult to carry out any direct study of the relationship between attributions, expectancies and clinical depression in a clinical population in which cognitions are measured

prior to the onset of depression. It has been argued that this is a basic necessary condition if the aetiological theory is to be directly examined and differentiated from other explanations such as that attributions are simply an aspect of the cognitive symptoms of depression.

Problems in Subject Selection and Symptom Measurement

A major problem in the study of clinical depression is the way clinical depression is conceptualised and measured. As has been discussed earlier in Chapter I, although a number of distinctions have been made within clinical depression (eg psychotic-neurotic, endogenous-reactive, primary-secondary) none is very helpful in tests of the reformulated learned helplessness theory. The endogenous-reactive distinction is the most promising but cannot as yet be made reliably and is often made on the basis of presenting symptomatology rather than aetiology. It is therefore difficult to select patient populations which are likely to include many reactive depressions rather than those of a biological origin.

Two main strategies have been used in studies of clinical populations. Most studies have used groups selected on the basis of psychiatric diagnosis, such as DSMIII or Spitzer's Research Diagnostic Criteria. However using such an approach, the diagnosis of major depressive disorder or unipolar depression may include many subjects who have a biological depression. It is certainly not obvious that diagnostic criteria are of particular relevance to the reformulated theory. As reviewed earlier studies which have compared subgroups of depression have found no significant differences (see page 44).

The second main strategy is to use a continuous measure of depression such as the Beck Depression Inventory, either to identify a depressed group using a cut off score, or to give a continuous measure of depression severity. This strategy was adapted in the studies reported in Chapter 4, 5 and 6. It may be argued that many of the subjects may not fulfill diagnostic criteria and that such measures are inappropriate. However this assumes that diagnostic criteria are more valid than continuous measures. This is far from clear in the study of psychological models of depression which tend to assume that depression is a continuously varying state. Indeed the use of non-clinical

analogues such as mild non-clinical depression in students only makes sense as a strategy if a continuous model of depression is assumed.

A disadvantage with both diagnostic criteria and continuous measures of depression is that they treat depression as a single entity, tending to ignore the components of depression which are of considerable importance in the theory. Factor analytic studies of the BDI, including that reported in Chapter 4, suggest that it is made up of a number of differentiable components, broadly cognitive, motivational (or performance deficits) and somatic. It has been argued above that it may be important to use scores reflecting these components rather than simply total score above an order to test aspects of the theory, particularly the relationship between self esteem and internality.

A final problem in subject selection concerns the issue of appropriate control groups. Many studies involving clinical populations have used either normal or non-psychiatric or psychotic control groups. It has been suggested here that anxious/non-depressed patients provide a more stringent control group than these and better allow the examination of how specific the theory is to depression. A possible illustration of this is in Chapter 3 where both depressed and anxious groups gave predominantly stable attributions concerning the cause of current concerns, a finding which might have appeared to support the reformulated theory if a "normal" or schizophrenic control group had been used.

Problems with the Measurement of Attributions and Expectancies

The main focus of interest in the research described above has been causal attributions and expectations concerning current concerns and symptoms. The measurement of these variables does however raise a number of conceptual and practical problems including the theoretical status of cognitions, their accessibility, the validity of measures and the appropriate forms of the attributions and expectations.

The theoretical status of attributions and expectancies, as was noted in Chapter I, is not always made clear. Attribution theorists often adopt a phenomenological stance, treating attributions as directly related to a person's experience. Attributions and expectations can however also be regarded as aspects of cognitive processing or as hypothetical constructs. In the former case attributions are hypothesised to exist

but may not be accessible or "conscious" (eg Nisbett and Wilson, 1977). In the latter case attributions have a purely theoretical status and serve to link sets of inputs and outputs by which they are defined. Verbal statements of attributions are in this sense just one of a number of outcome operations (eg Peterson and Seligman, 1984).

The use of attributions and expectations in the reformulated learned helplessness theory is not not always clear but seems usually to be one of these latter two senses. This then raises issues regarding the validity of verbal or written statements of attributions in response to specific questions as measures of actual cognitive processes or hypothetical intervening variables. Such verbal and written behaviours may be determined by other influences such as social reinforcement contingencies. Many cognitive processes may not be accessible to consciousness and hence to verbal behaviour and therefore may not be readily measurable by such methods. The issue of accessibility of cognitive processing can also be extended to the life events or current concerns themselves. People may not necessarily have access to knowledge of, or wish to disclose, current concerns, particularly if of a very personal or self esteem threatening nature. It may therefore be difficult to assess both the current concerns themselves and attributions and expectations concerning them, due to problems in accessibility (and perhaps defensiveness), a reluctance to disclose accessible information and the impact of social reinforcement contingencies.

The relationship between causal attributions and expectancies is a further general issue raised by this thesis. The relationship varied considerably between particular dimensions in the studies reported above. It appeared stronger for internality dimensions but less so for control. This issue certainly needs examining in more detail as expectations are an important aspect of many cognitive theories of depression including those of Abramson et al (1978), Teasdale (1985) and indeed Caine et al's (1981) theory of emotional disorders. It was noticeable that results for expectations obtained here were often less consistent, with few statistically significant results compared with those for causal attributions. Taken with the almost complete absence of studies of expectations in the literature arising from the reformulated theory, this suggests there may be particular methodological problems associated with attempting to measure expectations.

Finally the focus of causal beliefs remains an important issue, one which is often ignored or muddled in the literature. In particular the distinction between causal beliefs concerning the cause of events or problems and concerning the cause of failure to overcome or deal with events or problems may yet prove very important. Another important issue is the relative importance of causal beliefs concerning events, current concerns and the symptoms themselves. It may be that these four all play roles in particular depression, and that future work will need to differentiate these types and critical mechanisms of maintenance.

In conclusion the aetiological model of the reformulated learned helplessness theory is difficult to test directly and adequately. No studies reported in the literature come near to meeting criteria for an adequate test. The studies reported in Chapter 4, 5 and 6 are an improvement on most of those in the literature and utilised clinical populations, adequate controls and more relevant measures of attributions and expectancies. A major limitation was that depressive symptoms were measured at the same time as attributions and a considerable length of time after the depression commenced.

Causal Beliefs About Depression and the Maintenance of Depression

The relationship between attributions and expectancies concerning the symptoms of depression, and depressive symptomatology itself, were studied in Chapter 7. Given the difficulties in testing aetiological theories discussed above and the problems of measurement of attributions concerning life problems, it may prove more fruitful to examine the maintenance of depression and the role of causal beliefs concerning depression in this maintenance. This was examined from two quite different points of view: Teasdale's (1985) ideas about "depression about depression" as a maintaining factor in depression and Caine et al's (1981) proposals regarding the relationship between presenting symptom type and attitude to symptoms.

The study reported in Chapter 7 provided some evidence to support both proposals. Emotional, diffuse symptom presenters compared with specific neurotic symptom presenters attributed the cause of their symptoms more to psychological causes and their own personality and held themselves more responsible for their symptoms. They also held themselves more responsible for future change although they did not expect future change

to depend more on their own actions or less on medical treatment. Depression severity, as measured by BDI total score, was significantly positively correlated with attributions to psychological causes and rated responsibility for the cause of symptoms and negatively correlated with expectations of future change. However inspection of correlations with the individual factorial components of the BDI suggested that causal attributions and rated responsibility were mainly associated with factor two, negative attitude to self, while future expectations were associated with both factors one (loss of interest and energy) and two. (This finding again emphasises the importance of examining components of the BDI in addition to total scores when interpreting correlations between the BDI total score and other variables). It was also noted that the magnitude of correlations in this study were generally considerably higher than in the earlier studies of current concerns.

The findings therefore provided some evidence of an association between depressive symptoms, causal beliefs and expectations concerning symptoms and type of symptom presented. Diffuse emotional symptom presenters were more depressed, had a more negative attitude to themselves, and attributed the cause of their symptoms more to psychological causes. Depression severity was more closely associated with pessimism about future change, both change in symptoms and in the patients' ability to bring about future change (ie self efficacy). This was however a cross-sectional study and therefore must be interpreted with caution. This is particularly so as causal beliefs were obtained concerning symptoms and it is therefore not clear whether the associations obtained reflect differences in the focus of the causal beliefs, differences in the state of the subject or more enduring differences in the subjects. Thus one explanation might be that depressive symptoms generally tend to be attributed to psychological causes compared with non depressive (mainly anxious) symptoms. A second explanation is that, as Teasdale (1985) suggests, it is the depressed state of the subject which affects their causal beliefs. A third explanation is that people who tend to get depressed tend to attribute their symptoms more to psychological causes, a view in line with Caine et al's work. In addition a cross-section study cannot directly examine the role of cognitions in maintenance. Longitudinal studies will be needed to examine this.

The study reported in Chapter 7 therefore provided initial but promising evidence that causal beliefs about depression and how patients present

their symptoms may be a more fruitful area of study than causal beliefs concerning life events or current concerns. It may also prove more practically possible to examine theories about maintenance and response to treatment than aetiological and vulnerability theories since they do not require subjects to be tested before the onset of their psychiatric disorder.

To conclude, cognitive theories of depression have stimulated much research and the development of cognitive treatment methods over the past two decades. These theories have provided and continue to offer a stimulus to examining the nature of emotional disorders from a cognitive point of view. It has to date proved somewhat easier to obtain evidence of the therapeutic effectiveness of cognitive theories (although the mechanism by which such theories are effective remain much less certain) than evidence that cognitions play a causal role in the development and maintenance of depression. Future studies may need to attempt to demonstrate the specific role of cognitive processes in the disorders perhaps by treatment or other intervention studies.

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Appendix A

CURRENT CONCERNS INTERVIEW

I should like you to tell me about problems in your life that concern you at the moment, or have concerned you during the past month. By problems I mean anything about yourself and your life that you are unhappy about, dissatisfied with or would like to change.

To help you to do this I would like to ask you about different aspects of your life your health, social life, family life and so on. In each case I am particularly interested in whether you are dissatisfied with that part of your life in any way.

I am not only interested in aspects of your life that may be causing you symptoms but rather any part of your life that you are not happy with, even if it has nothing to do with your psychiatric problems.

(The interviewer will go through each section as detailed below. It is not necessary to repeat on each occasion the question "During the past month have you been dissatisfied or concerned about" unless the interviewee gives some indication of not understanding that this is the question. It is important to avoid, as far as possible, frequent repetition of the word "dissatisfaction" which may itself have a depressing effect.)

During the past month have you been dissatisfied with or concerned about any of the following:-

A Health:

By health I am including illnesses, operations, accidents, chronic health problems, handicaps, disabilities, fitness worries - eg through smoking, drink or weight problems, and health worries (including worries about dying or having serious illness).

(Where it is unclear enquire if the person is concerned about any health problems.)

B Social and Leisure Life:

- 1 Visits to your home, (or lack of them) by friends or guests
- 2 Visits to friends
- 3 Your social life (eg going out to clubs, pubs, etc)
- 4 Your recreational activities (hobbies, sport, films, etc)
- 5 Holidays (or holiday plans)
- 6 Day trips and outings

C Home Environment:

- 1 Your house (kind - terraced, etc, size, condition, etc)
- 2 Your neighbourhood
- 3 The area where you live
- 4 Living in the Potteries

D Home Management:

- 1 How your home is run and looked after (including cooking, washing, cleaning and shopping, etc)
- 2 How decisions are made about buying large items for the home

E Work:

- 1 If you are not working at present - your lack of work
- 2 If you are working, or have a job to go back to - your job and the work you do (including pay, conditions, kind of work, bosses, workmates, hours and your work performance)
- 3 Your future prospects with regard to work

F Finances:

- 1 Your financial situation (including where the money comes from and whether it is sufficient to live on, etc)
- 2 How the finances are managed in your home (eg how the money is divided, who pays bills, etc)

G Key Relationships:

(From case notes establish whether parents are alive; whether patient married and whether patient has any children.)

I would like to ask you about the people who are important to you in your life. Are there any people besides your parents, spouse and children who are important to you? What about your brothers and sisters if any? or in-laws? other relatives? close friends? Please mention people if you are apart from them, even if they are dead, if they are still important to you.

Which of these people live with you?

- 1 I am interested if you are dissatisfied or have been dissatisfied during the past month with any aspect of your relationship with each of these people -

By this I include how you get on with them, how much you see them, how secure you feel about your relationship with them and anything else about them that affects you (such as how well disciplined your children are, or how miserable your parents are, etc).

(The interviewer should take each person in turn but need not repeat above question unless it seems likely that the person has forgotten or misunderstood some part of it. Where the patient has not got anybody in a particular relationship with him they should be questioned whether they have any dissatisfaction about this - mother, father, brothers, sisters, spouse, children, close friends.)

2 Sexual Relationships:

Any aspect of the sexual side of your life (including your partner or partners, the satisfaction you get from your sex life and any other sexual outlets).

H Relationships with Friends

Your relationship with your friends, or lack of them (including number of friends, how much you see of them, and how you get on with them).

I Relationships with Acquaintances and Strangers, etc

Are you dissatisfied in any way with how you get on with, or deal with:

- 1 Acquaintances (people you know well enough to say hello to)?
- 2 Neighbours?
- 3 Shop Assistants and Shop Managers?
- 4 Bus Conductors?
- 5 People who come to your home, such as meter readers, milkmen, salesmen, window cleaners, rent collectors, etc?
- 6 Government Officers, (eg at Job Centres, Social Security, etc)?
- 7 People in the Health Service (eg nurses, doctors, social workers, dentists, psychologist, etc)?
- 8 Teachers in schools?

J Yourself:

- 1 Your physical appearance, face, hair, weight, shape, etc?
- 2 Undesirable habits eg smoking, drinking, drug taking or nail biting?
- 3 Things you feel compelled to do even if don't want to, eg washing, cleaning, repetitive checking, etc?
- 4 Anything that you do but regret later, eg getting into fights, losing your temper, breaking things, sulking, being insulting or over-critical, stealing and other criminal activities, sexual activities?
- 5 Thoughts or fantasies which you dislike in any way, such as worrying thoughts, unpleasant thoughts, or sexual and aggressive fantasies?
- 6 Situations, things or people that you avoid if at all possible?
- 7 Any abilities or skills which at present you do not possess but which you would like to eg driving, cooking, work skills, artistic skills, etc?
- 8 Situations involving people, or ways of dealing with people which you have difficulty with?

K General:

Finally is there anything about yourself or your life, which I have not covered which you are dissatisfied with at present?

CLARIFICATION OF CURRENT CONCERNS

Where any possible dissatisfaction or concern is elicited during the first part of the interview further questions should be asked to clarify them.

These should:-

- 1 Establish in as much detail as possible exactly what is the present situation and what is the desired situation.
(This should be expressed, as far as possible, in precise, concrete terms, without explanatory references, eg being out of work - working in a full time job of any kind: not being able to drive - passing my driving test. It should exclude reference to the cause of dissatisfaction, eg "Have lost my confidence to get a job.)

- 2 In particular clarify whether what is desired is simply to do something or go somewhere or to do so and feel certain emotions or be able to act in certain ways - eg to go shopping or go shopping feeling relaxed and interested, or to go to work and not feel panicky.

- 3 In particular clarify whether this dissatisfaction is with the situation or with the patient's reaction to it, eg having chest pains or worrying about having chest pains.

Each current concern is then written on a 5" x 3" card in the following form:

Present:

Desired:

eg Present: I am not working

Desired: I am working full time in any job

Present: There is a lot of tension between myself and my husband

Desired: There is little tension between myself and my husband

The card should then be placed in front of the interviewee, who should then be asked:

i) "Are you happy with how I have worded these current concerns? Do they express them clearly and accurately?"

ii) "Are any of these current concerns linked (in your view)? For example, if any of them was overcome, would others be overcome as well?"

(Any pairings or groupings introduced by the interviewee should be discussed with him/her. If the current concerns are perceived as causally related in a direct way (eg A-B) then only the superordinate concern should be retained. Current concerns with the same perceived cause should be retained.)

4 Ranking:

If number of cards < 12 :

All 12 cards are placed in front of 'I', who is asked "Now would you please place cards in front of you in order of their importance to you, ie, place the most important at the top, the next most important below that, etc".

If number of cards > 12 :

A discarding procedure is used:-

The cards are divided into packs of 12 or less (ie if 12-24 - 2 packs, if 24-35 - 3 packs, etc) and 'I' is asked to choose the least important dissatisfactions, such that a total of 12 cards will remain (ie if two packs of 10 cards I is asked to choose the four least important from each pack, if three packs of 9 the five least important, etc).

5 Duration:

The interviewee is asked:

"How long have you been dissatisfied about each of these situations shown on the cards."

This is done for each of the top 12 ranking cards.

Current concerns of less than one months duration are excluded from the Causal Beliefs Interview.

Appendix B

CURRENT CONCERNS INTERVIEW Interviewees Copy

I should like you to tell me about problems in your life that concern you at the moment, or have concerned you during the past month. By problems I mean anything about yourself and your life that you are unhappy about, dissatisfied with or would like to change. To help you to do this I would like to ask you about different aspects of your life your health, social life, family life and so on. In each case I am particularly interested in whether you are dissatisfied with that part of your life in any way. I am not only interested in aspects of your life that may be causing you symptoms but rather any part of your life that you are not happy with, even if it has nothing to do with your psychiatric problems.

During the past month have you been dissatisfied with or concerned about any of the following:-

A Health:

By health I am including illnesses, operations, accidents, chronic health problems, handicaps, disabilities, fitness worries - eg through smoking, drink or weight problems, and health worries (including worries about dying or having serious illness).

B Social and Leisure Life:

- 1 Visits to your home, (or lack of them) by friends or guests
- 2 Visits to friends
- 3 Your social life (eg going out to clubs, pubs, etc)
- 4 Your recreational activities (hobbies, sport, films, etc)
- 5 Holidays (or holiday plans)
- 6 Day trips and outings

C Home Environment:

- 1 Your house (kind - terraced, etc, size, condition, etc)
- 2 Your neighbourhood
- 3 The area where you live
- 4 Living in the Potteries

D Home Management:

- 1 How your home is run and looked after (including cooking, washing, cleaning and shopping, etc)
- 2 How decisions are made about buying large items for the home

E Work:

- 1 If you are not working at present - your lack of work
- 2 If you are working, or have a job to go back to - your job and the work you do (including pay, conditions, kind of work, bosses, workmates, hours and your work performance)
- 3 Your future prospects with regard to work

F Finances:

- 1 Your financial situation (including where the money comes from and whether it is sufficient to live on, etc)
- 2 How the finances are managed in your home (eg how the money is divided, who pays bills, etc)

G Key Relationships:

I am interested if you are dissatisfied or have been dissatisfied during the past month with any aspect of your relationship with each of these people -

By this I include how you get on with them, how much you see them, how secure you feel about your relationship with them and anything else about them that affects you (such as how well disciplined your children are, or how miserable your parents are, etc).

Father

Mother

Brothers

Sisters

Spouse/Girlfriend/Boyfriend

Children

In-Laws

Close Friends

Any other people who are important to you

2 Sexual Relationships:

Any aspect of the sexual side of your life (including your partner or partners, the satisfaction you get from your sex life and any other sexual outlets).

H Relationships with Friends

Your relationship with your friends, or lack of them (including number of friends, how much you see of them, and how you get on with them).

I Relationships with Acquaintances and Strangers, etc

Are you dissatisfied in any way with how you get on with, or deal with:

- 1 Acquaintances (people you know well enough to say hello to)?
- 2 Neighbours?
- 3 Shop Assistants and Shop Managers?
- 4 Bus Conductors?
- 5 People who come to your home, such as meter readers, milkmen, salesmen, window cleaners, rent collectors, etc
- 6 Government Officers, (eg at Job Centres, Social Security, etc)?
- 7 People in the Health Service (eg nurses, doctors, social workers, dentists, psychologist, etc)?
- 8 Teachers in schools?

J Yourself:

- 1 Your physical appearance, face, hair, weight, shape, etc
- 2 Undesirable habits eg smoking, drinking, drug taking or nail biting
- 3 Things you feel compelled to do even if don't want to, eg washing, cleaning, repetitive checking, etc?
- 4 Anything that you do but regret later, eg getting into fights, losing your temper, breaking things, sulking, being insulting or over-critical, stealing and other criminal activities, sexual activities?
- 5 Thoughts or fantasies which you dislike in any way, such as worrying thoughts, unpleasant thoughts, or sexual and aggressive fantasies?
- 6 Situations, things or people that you avoid if at all possible?
- 7 Any abilities or skills which at present you do not possess but which you would like to eg driving, cooking, work skills, artistic

skills, etc?

8 Situations involving people, or ways of dealing with people which you have difficulty with?

K General:

Finally is there anything about yourself or your life, which I have not covered which you are dissatisfied with at present?

APPENDIX C

CAUSAL BELIEFS INTERVIEW

Each of the first six highest ranking current concerns identified by the current concerns interview is taken in turn.

General Introduction

"In this part of the interview I am interested in what, in your view, is the cause of each of the current concerns. There are no right or wrong answers as I am only interested in how you see the cause."

For each current concern

The card is placed in front of the subject who is asked:

- 1 PRESENT "What in your view is the main cause(s) of this?"

The subjects spontaneous reply is noted.

The following question are then asked about the main cause given:

a) Internality

Is the cause of this something about you as a person (something you did, your abilities or personality, etc), something about your impersonal self (your body and physical make-up), about other people or about your environment or circumstances?

self personal (1); other people (2); impersonal world (3); impersonal self (4)

b) Internality (Personal-Universal)

Would anybody else in your circumstances have been likely to have ended up with this dissatisfaction, or is the cause something particular about you or what you did?

personal (1); universal (0)

The next question applies only where question a) is rated (1) or (2)

c) Characterological-Behavioural

Is the cause something you did or did not do, or because you did not try enough, or because of something about your personality, attitude or abilities?

characterological (1); behavioural (2); not applicable (0)

d) Stability - (likelihood)

How likely is it that the cause will change in the future - impossible or certain not to, unlikely, quite likely, very likely or certain?

impossible (0); almost certain not to (1); unlikely (2); quite likely (3); very likely (4); certain (5)

e) Stability - (time scale)

If it is at all likely to change, will the change be in days (0-13), weeks (2-7), months (2-23) or years (2 or more)?

days (5); weeks(4); months (3); years (2); almost certain not to (1); impossible, certain not to (o)

f) Globality

How many areas of your life (family, social, health, work etc) has this cause directly affected - only one, area, a few areas, some (about half), most or all areas?

all areas (1); most areas (2); some (about half) (3); few (4); one only (5)

g) Control

To what extent, if any, is this cause under your control at the present time - completely, considerably, moderately, a little or not at all?

not at all (1); little (2); moderate (3); considerable (4); complete (5)

h) Personal Responsibility

To what extent, if any do you hold yourself responsible for this cause - totally, considerably, moderately, a little or not at all?

totally (1); considerably (2); moderately (3); a little (4), not at all (5)

i) Others Responsibility

To what extent do you hold others responsible for this cause - totally, considerably, moderately, a little or not at all?

not at all (1); a little (2); moderately (3); considerably (4); totally (5)

Where subjects are unable to give a codable response on any item this is scored (9).

2. FUTURE

If the situation (on the card) changed in the future in the direction you desire, what in your view is most likely to be the cause?

The subjects spontaneous reply is noted.

The following questions are then asked about the main cause given above:

a) Internality

Is this cause a change in you as a person or in what you do, a change in other people, a change in your circumstances or in your physical self?

self personal (1); other people (2); impersonal world (3); impersonal self (4)

b) Source of Change

Would this change arise from basically a change in your circumstances, or from a change in something about you?

from self (1); from circumstances (o)

The next question applies only where a) is rated (1) or (2)

c) Behavioural - Characterological

Would this cause be a change in what you do, a change in how much you try or a change in your personality, attitudes or ability?

characterological (1); behavioural (2); not applicable (o)

d) Expectation - likelihood

How likely is it that this cause will occur in the future - impossible or certain not to, almost certain not to, unlikely, quite likely, very likely, certain?

impossible or certain not to (o); almost certain not to (1); unlikely (2); quite likely (3); very likely (4); certain (5)

e) Expectation - time scale

If this cause is at all likely to occur, will it be most likely to occur within days (1-13), weeks (2-7), months (2-23) or years?

impossible or certain not to (o); almost certain not to (1); years (2); months (3); weeks (4); days (5)

f) Globality

How many areas of your life (family, social, work, etc) would this cause directly affect - only one area, a few areas, some (about half), most or all areas?

all areas (1); most areas (2); some (about half) areas (3); few areas (4); one area (5)

g) Controllability

To what extent, if any, is the future occurrence of this cause under your control at the present time - completely, considerably, moderately a little or not at all

not at all (1); little (2); moderately (3); considerable (4); complete (5)

h) Personal Responsibility

To what extent, if any, do you hold yourself responsible for whether this cause occurs in the future - totally, considerably, moderately, a little or not at all?

totally (1); considerably (2); moderately (3); a little (4); not at all (5)

1) Others Responsibility

To what extent, if any, do you hold other people responsible for whether this cause occurs in the future - totally, considerably, moderately, a little or not at all?

not at all (1); a little (2); moderately (3); considerably (4); totally (5)

Appendix D

PRESENT STATE EXAMINATION

HEALTH, WORRYING, TENSION

** Is your physical health good?

(Does your body function normally?)

** Do you feel you are physically ill in any way?

(What is that like? How serious is it?)

RATE SUBJECT'S OWN SUBJECTIVE EVALUATION OF PRESENT PHYSICAL HEALTH
(irrespective of whether physical disease is present)

0 = Feels physically very fit

1 = Feels no particular physical complaint but does not say positively
feels fit

2 = Feels unwell but not seriously incapacitated

3 = Feels seriously incapacitated by physical illness

** What does your doctor say is wrong?

(Have you had a physical illness recently; colds, influenza, etc?)

RATE PRESENCE OF PHYSICAL ILLNESS OR HANDICAP, taking results of recent
investigations and physical state examinations into account

0 = No physical illness or handicap present

1 = Mild but significant physical illness or handicap (eg influenza or
limp)

2 = More serious physical illness or handicap present but not
incapacitating or threatening to life (eg deafness or duodenal ulcer)

3 = Physical illness or handicap present which is incapacitating or
threatening to life (eg blindness or carcinoma)

Specify illness, disabilities and duration:

RATE PSYCHOSOMATIC SYMPTOMS

Special projects only

** Have you worried a lot during the past month?

(What do you worry about?)

PROBE: (Money, housing, children, health, work, marriage, relatives,
friends, neighbours, other)

(How much do you worry? Are you a worrier?)

If indication of worry, use further probes:

** What is it like when you worry?

(What sort of state of mind do you get into?)

(Do unpleasant thoughts constantly go round and round in your mind?)

(Can you stop them by turning your attention to something else?)

RATE WORRYING: A round of painful thoughts which cannot be stopped and is out of proportion to the subject worried about.

1 = Symptom definitely present during the past month, but of moderate clinical intensity, or intense less than 50% of the time

2 = Symptom clinically intense more than 50% of the month

** Have you had headaches, or other aches and pains, during the past month? (What kind?)

RATE ONLY TENSION PAINS eg 'band round head', 'pressure', 'tightness in scalp', 'ache in back of neck', etc not migraine

1 = Symptom definitely present during past month, but of moderate clinical intensity, or intense less than 50% of the time

2 = Symptom clinically intense more than 50% of past month

** Have you been getting exhausted and worn out during the day or evening, even when you haven't been working very hard?

RATE TIREDNESS OR EXHAUSTION: Do not include tiredness due to flu, etc =9

1 = Only moderate form of symptom (tiredness) present; or intense form (exhaustion) less than 50% of the time

2 = Intense form of symptom (exhaustion) present more than 50% of the past month

** Have you had difficulty in relaxing during the past month?
(Do your muscles feel tensed up?)

RATE MUSCULAR TENSION: Do not include a subjective feeling of nervous tension, which is rated later

1 = Symptom definitely present during past month, but of moderate clinical intensity, or intense less than 50% of the time
2 = Symptom clinically intense more than 50% of past month

** Have you been so fidgety and restless that you could not sit still?

RATE RESTLESSNESS

(Do you have to keep pacing up and down?)

1 = Only moderate form of symptom (fidgety, restless) present; or intense form (pacing can't sit down) less than 50% of the time
2 = Intense form of symptom (pacing etc) present more than 50% of past month

** Do you tend to worry over your physical health?

RATE HYPOCHONDRIASIS: Overconcern with possibility of death, disease or malfunction. Re-rate at end of interview if subject constantly reverts to hypochondriacal preoccupation. Consider ratings of symptoms (1) and (3).

1 = Symptom present during past month, but not (2)
2 = Subject constantly reverts to hypochondriacal preoccupations during interview

** Do you often feel on edge or keyed up or mentally tense or strained?
(Do you generally suffer with your nerves?)
(Do you suffer from nervous exhaustion?)

RATE SUBJECTIVE FEELING OF 'NERVOUS TENSION': There is no need for

autonomic accompaniments for this symptom to be rated present.

- 1 = Symptom definitely present during past month, but of moderate intensity, or intense less than 50 % of the time
- 2 = Intense form of symptom present more than 50% of the past month

** Do you find that a lot of noise upsets you?
(Do noises sometimes seem to penetrate, or go through your head?)

RATE HYPERSENSITIVITY TO NOISE

- 1 = Moderate degree during month
- 2 = Severe degree during month

AUTONOMIC ANXIETY

In this section, rate only subjective anxiety with autonomic accompaniments, either free-floating or situational. Do not include worrying or nervous tension. Do not include anxiety due to eg persecutory delusions, except in the special item (no 13).

(Check list of autonomic accompaniments:

Blushing	Dry mouth
Butterflies	Giddiness
Choking	Palpitations
Difficulty getting breath	Sweating
Dizziness	Trembling)

** Have there been times lately when you have been very anxious or frightened?
(What was this like?)
(Did your heart beat fast?) Ask for other autonomic symptoms
(How often in the past month?)

RATE FREE-FLOATING AUTONOMIC ANXIETY: Exclude if due to desusions.
Exclude if purely situational.

- 1 = Symptom definitely present, with autonomic accompaniment, during past month, but of moderate clinical intensity, or intense less than 50% of the time

2 = Symptom clinically intense more than 50% of the time

** Have you had the feeling that something terrible might happen?

(That some disaster might occur but you are not sure what? Like illness or death or ruination?)

(Have you been anxious about getting up in the morning because you are afraid to face the day?)

(What did it feel like?)

RATE ANXIOUS FOREBODING WITH AUTONOMIC ACCOMPANIMENTS

1 = Symptom definitely present, with autonomic accompaniment, during past month, but of moderate clinical intensity, or intense less than 50% of the time

2 = Symptom clinically intense more than 50% of the time

RATE AUTONOMIC ANXIETY DUE TO DELUSIONS, etc and if necessary defer to end of interview

0 = No anxiety due to delusions or hallucinations

1 = Subject complains of anxiety but no evidence of anxiety on examination

2 = Clearly anxious or frightened because of delusions or hallucinations

CUT OFF IF NO EVIDENCE OF ANXIETY OR IF ANXIETY DUE ONLY TO DELUSIONS
SECTION 4

Have you had times when you felt shaky, or your heart pounded, or you felt sweaty, and you simply had to do something about it?

(What was it like?)

(What was happening at the time?)

(How often during the past month?)

RATE PANIC ATTACKS WITH AUTONOMIC SYMPTOMS: A panic attack is an intolerable anxiety leading to some action to end it, eg leaving a bus, phoning husband at work, going in to see a neighbour, etc

1 = One to four panic attacks during month

2 = Panic attacks five times or more

Do you tend to get anxious in certain situations, such as travelling, or being alone, or being in a lift or tube train?

(What situations? How often during the past month?)

CHECK LIST: can be presented on separate card and each item rated separately, if needed.

Crowds (shop, street, theatre, cinema, church)

Going out alone; being at home alone

Enclosed spaces (hairdresser, phone booth, tunnel)

Open spaces, bridges

Travelling (buses, cars, trains)

RATE SITUATIONAL AUTONOMIC ANXIETY

1 = Has not been in such situations during the past month but aware that anxiety would have been present if the situation had occurred

2 = Situation has occurred during the past month and patient did feel anxious because of it

What about meeting people, eg going into a crowded room, making conversation?

CHECK LIST: Present card if necessary:

Speaking to an audience

Eating, drinking or writing in front of other people

Parties

RATE AUTONOMIC ANXIETY ON MEETING PEOPLE

1 = Has not been in such situations during the past month but aware that anxiety would have been present if the situation had occurred

2 = Situation has occurred during the past month and patient did feel anxious because of it

Do you have any special fears, like some people are scared of feathers or cats or spiders or birds?

CHECK LIST: Present card if necessary:

Heights, thunderstorms, darkness, animals, or insects of any kind

Dentists, injections, blood, injury

RATE ONLY SPECIFIC PHOBIAS, NOT GENERAL SITUATIONAL ANXIETY

- 1 = Has not been in such situations during the past month but aware that anxiety would have been present if the situation had occurred
- 2 = Situation has occurred during the past month and patient did feel anxious because of it

Do you avoid any of these situations (specify as appropriate) because you know you will get anxious?

(How much does it affect your life?)

RATE AVOIDANCE OF ANXIETY-PROVOKING SITUATIONS

- 1 = Subject tends to avoid such situations whenever possible
- 2 = Marked generalisation of avoidance has occurred during past month eg subject has not dared to leave the house or has gone out only if accompanied

Describe anxiety symptoms and list phobias

THINKING, CONCENTRATION, ETC

** Can you think clearly or is there any interference with your thoughts?

** Do your thoughts tend to be muddled or slow?

(Can you make up your mind about simple things quite easily?) (Make decisions about everyday matters?)

RATE SUBJECTIVELY INEFFICIENT THINKING (if due to intrusion of alien thoughts, rate 9)

- 1 = Symptom definitely present during the past month, but of moderate clinical intensity, or intense less than 50% of the time
- 2 = Symptom clinically intense more than 50% of the past month

** What has your concentration been like recently?

(Can you read an article in the paper or watch a TV programme right through?)

(Do your thoughts drift off so that you don't take things in)

RATE POOR CONCENTRATION

- 1 = Only moderate form of symptom present during the past month (eg can read a short article, can concentrate if tries hard); or intense less than 50% of the time
- 2 = Symptom clinically intense (cannot attempt to read or concentrate) more than 50% of the past month

** Do you tend to brood on things?
(So much that you even neglect your work?)

RATE NEGLECT DUE TO BROODING

- 1 = Symptom has caused moderate impairment to work or social relationships
- 2 = Marked impairment

** What about your interests, have they changed at all?
(Have you lost interest in work, or hobbies, or recreations?)
(Have you let your appearance go?)

RATE LOSS OF INTEREST continuing during the past month

- 1 = Symptom definitely present during the past month, but of moderate clinical severity or severe loss less than 50% of the time
- 2 = Symptom clinically severe more than 50% of the past month

DEPRESSED MOOD

** Do you keep reasonably cheerful or have you been very depressed or low spirited recently?
Have you cried at all?
(When did you last really enjoy doing anything?)

RATE DEPRESSED MOOD NB When rating clinical severity of depression remember that deeply depressed people may not necessarily cry.

- 1 = Only moderately depressed during past month, or deep depression for less than 50% of the time and tending to vary in intensity

2 = Deeply depressed for more than 50% of the past month, and tending to be unvarying in intensity

** How do you see the future?

(Has life seemed quite hopeless?)

(Can you see any future?)

(Have you given up or does there still seem some reason for trying?)

RATE HOPELESSNESS on subject's own view at present

1 = Hopelessness of moderate intensity but still have some degree of hope for the future (irrespective of time during month)

2 = Intense form of symptom (Patient has given up hope altogether)

USE JUDGEMENT ABOUT WORDING

** Have you felt that life wasn't worth living?

(Did you ever feel like ending it all?)

(What did you think you might do?)

(Did you actually try?)

RATE SUICIDAL PLANS OR ACTS

1 = Deliberately considered suicide (not just a fleeting thought) but made no attempt

2 = Suicidal attempt but subject's life never likely to be in serious danger, except unintentionally

3 = Suicidal attempt apparently designed to end in death (ie accidental discovery or inefficient means)

NB Examiner should judge clinically whether there was intent to end life or not. If in doubt, assume not.

Is the depression worse at any particular time of day?

RATE MORNING DEPRESSION (particular on waking)

0 = No depression

1 = Not specially marked in mornings

2 = Specially marked in mornings

SELF AND OTHERS

** Have you wanted to stay away from other people?

(Why?)

(Have you been suspicious of their intentions? Of actual harm?)

RATE SOCIAL WITHDRAWAL

1 = Only passive from of symptom ie subject does not seek company but does not refuse it if offered; or, if active withdrawal, less than 50% of the month

2 = Actively avoids company (refuses it if offered). Actively withdraws in this way for more than 50% of the month

** What is your opinion of yourself compared to other people?

(Do you feel better, or not as good, or about the same as most?)

(Do you feel inferior or even worthless?)

RATE SELF-DEPRECIATION

1 = Some inferiority, not amounting to feeling of worthlessness. If subject consideres self to be worthless, this intense form of the symptom is present less than 50% of the time

2 = Subject consideres self to be completely worthless. Symptom present more that 50% of the month

** How confident do you feel in yourself.

(For example, in talking to others, or in managing your relations with other people?)

RATE LACK OF SELF-CONFIDENCE WITH OTHER PEOPLE. Consider only competence in social relationships, not competence at mechanical work, et

1 = Moderate lack of self-confidence, or intense lack less than 50% of the month

2 = Intense lack of self-confidence more than 50% of the month

** Are you self-conscious in public?

(Do you get the feeling that other people are taking notice of you in

the street or a bus or a restaurant?)

(Do they ever seem to laugh at you or talk about you critically?)

(Do you consider people really are looking at you, or is it perhaps the way you feel about it?)

RATE SIMPLE IDEAS OF REFERENCE (NOT DELUSIONS)

1 = Marked self-consciousness only (irrespective of time during month)

2 = Feels that people are criticising or laughing at self but can be reassured

IF NO EVIDENCE OF GUILT, CUT OFF SECTION 7

(IF EVIDENCE OF MISINTERPRETATIONS, DELUSIONS OF REFERENCE OR PERSECUTION SECTIONS 15B, 15C.)

IF EVIDENCE OF GUILT:

Do you have the feeling that you are being blamed for something, or even accused? What about?

RATE GUILTY IDEAS OF REFERENCE. Do not include justifiable blame or accusation. Exclude delusions of guilt.

1 = Subject feels blamed but not accused (irrespective of time during month)

2 = Subject feels accused of some sin or misdemeanour. Not delusional.

Do you tend to blame yourself at all?

(If people are critical, do you think you deserve it?)

RATE PATHOLOGICAL GUILT ONLY

1 = Subject feels over-guilty about some peccadillo (irrespective of time during month)

2 = Subject feels to blame for everything that has gone wrong even when not his fault, but not delusional

APPETITE, SLEEP, RETARDATION, LIBIDO

** What has your appetite been like recently?

(Have you lost any weight during the past three months?)

RATE LOSS OF WEIGHT DUE TO POOR APPETITE: do not include changes due to physical illness

1 = Less than 7lb (15 kg)

2 = 7lb (15 kg) or more

** Have you had any trouble getting off to sleep during the past month?

(How long do you lie awake?)

(What happens if you take sleeping tablets?)

(How often does it happen?)

RATE DELAYED SLEEP

1 = One hour or more delay (irrespective of sleeping tablets).

2 = Two hours or more delay (irrespective of sleeping tablets). (In either case, ten or more nights during month).

** Do you seem to be slowed down in your movements, or to have too little energy recently? How much has it affected you?

(Do things seem to be moving too fast for you?)

RATE SUBJECTIVE ANERGIA AND RETARDATION

1 = Marked subjective listlessness and lack of energy

2 = Marked retardation and underactivity (Irrespective of time during month).

IF NO APPETITE OR SLEEP DISTURBANCE, AND NO DEPRESSION, CUT OFF SECTION 8

IF SLEEP DISTURBANCE OR DEPRESSION:

Do you wake early in the morning?

RATE EARLY WAKING (one hour before usual)

- 1 = One hour or more before ordinary time
2 = Two hours or more before ordinary time
(In either case, ten or more nights during month)

Has there been any change in your interest in sex?

RATE LOSS OF LIBIDO WITHIN PRESENT EPISODE OF ILLNESS AND PERSISTING DURING PAST MONTH

- 1 = Marked loss of interest and performance
2 = Almost total loss of libido

Does the depression or tension get worse just before the start of the monthly period?

RATE PREMENSTRUAL EXACERBATION

- 0 = No definite exacerbation
1 = Marked exacerbation

IRRITABILITY

- ** Have you been very much more irritable than usual recently?
(How do you show it?)
(Do you keep it to yourself, or shout, or even hit people?)

RATE IRRITABILITY

- 1 = Keeps irritation to himself
2 = Shows anger by shouting or quarrelling
3 = Shows anger by hitting people, throwing or breaking things.

OBSESSIONS

These symptoms are usually experienced as occurring against conscious resistance (see definition in glossary).

- ** Do you find that you have to keep on checking things that you know you have already done?

(Like gas taps, doors, switches, etc)

(Do you have to touch or count things many times or repeat the same action over and over again?)

(What happens when you try to stop?)

RATE OBSESSIVE CHECKING AND REPEATING

1 = Symptom of moderate intensity or, if severe, present less than 50% of the time

2 = Symptom present in severe degree, more than 50% of the past month

** Do you spend a lot of time on personal cleanliness, like washing over and over even though you know you are clean? What about tidiness?

(Do you get worried by contamination with germs?)

(Do you have other rituals?)

(What happens when you try to stop?)

RATE OBSESSIVE CLEANLINESS AND SIMILAR RITUALS

1 = Symptom of moderate intensity or, if severe, present less than 50% of the time

2 = Symptom present in severe degree, more than 50% of past month

** Do you find it difficult to make decisions even about trivial things?

(Do you constantly have to question the meaning of the universe?)

(Do you get awful thoughts coming into your mind even when you try to keep them out?)

(What happens when you try to stop?)

RATE OBSESSIVE IDEAS AND RUMINATION

1 = Symptom of moderate intensity or, if severe, present less than 50% of the time

2 = Symptom present in severe degree, more than 50% of the past month

DEREALISATION AND DEPERSONALISATION

** Have you had the feeling recently that things around you were unreal?

(As though everything was an imitation of reality, like a stage set, with people acting instead of being themselves?)

(What is it like? How do you explain it?)

RATE DEREALISATION

- 1 = Moderately intense form of symptom definitely occurred during the past month, and persisted for hours at a time. Things appear artificial, people appear lifeless and seem to act rather than being themselves
- 2 = Intense form of symptom occurred during the past month and persisted for hours at a time, eg whole world appears like a gigantic stage set, with imitation instead of real objects and puppets instead of people. (If delusional, do not rate here but symptom 90)

** Have you yourself felt unreal, that you were not a person, not in the living world?

(Or that you were outside yourself, looking at yourself from outside?)

(Or that you look unreal in the mirror?)

(Or that some part of your body did not belong to you?)

(How do you explain it?)

RATE DEPERSONALISATION

- 1 = Moderately intense form of the symptom definitely occurred during the past month and persisted for hours at a time. Subject feels himself unreal, a sham, a shadow
- 2 = Intense form of symptom definitely occurred during the past month and persisted for hours at a time. Subject feels he is dead, not a person, living in a parallel existence, a hollow shell, even that he does not exist. (If delusional, do not rate here but symptom 90)

Appendix E

METHODS USED TO DESCRIBE PATIENTS CAUSAL EXPLANATIONS AND EXPECTATIONS

The two methods used in this study were as follows:

Method I

Individual scores for each dimension were comprised by averaging the ratings given over all six current concerns rated. These individual averaged scores were then averaged over all subjects in the defined group

eg

one subject

individual scores for each current concern	3	4	3	2	4	5		
average score on dimension				3.5		2.5	4.0	2.0
average score for subject in defined group								3.0

This is the method used in most studies of causal explanations regarding hypothetical or real life events.

Method II

In this case the method for obtaining the individual average score is as above but each average score is then categorised (eg high, low on dimension). Each defined group is then described in terms of the frequency of subjects within these categories

eg

	one subject					
individual scores for each current concern	3	4	3	2	4	5
average score on dimension	2.5	3.5	4.0	2.0		
score categorised eg as high, low	low	high	low	high		
group defined in terms of frequency in each category	high 2 subjects; low 2 subjects					

The criterion used for each dimension are inevitably somewhat arbitrary but were decided with reference to the verbal labels attached to each individual current concern rating. The criterion are given as follows, with the equivalent verbal labels given in brackets.

Internality:

Internal: range 0.51-1.0 (internal rating 1.0)

External: range 0.0 -0.50 (external rating 0)

Universality:

Personal: range 0.51-1.0 (personal rating 1.0)

Universal: range 0.0-0.50 (universal rating 0)

Globality:

Global: range 1-2.49 (affecting all (4) or most areas(3) of life)

Not Global: range 2.50-5.0 (affecting some (3), few (4) or one area (1) of life)

Stability (likelihood):

Stable: range 0-2.49 (impossible (0), almost certain not to (1) or unlikely to change(2))

Not stable: range 2.50-5.0 (quite (3), very (4), likely or certain (5) to change)

Stability (time-scale):

Stable: range 0-2.49 (impossible (0), almost certain not to (1), years (5) to change)

Not stable: range 2.50-5.0 (change likely in months (3), weeks (2) or days (5))

Controllability:

Uncontrollable: range 1-2.49 (not at all (0), little (1) under control)

Not controllable: range 2.5-5.0 (moderate (3), considerable (4), or
complete (5) control)

Personal Responsibility:

High: range 1-2.49 (totally (1), considerably (2) responsible)

Not high: range 2.5-5.0 (moderate (3), little (4) or no (5) personal
responsibility)

Other responsibility: as for personal responsibility.

It may be noted that these categories with the exception of the two internal dimensions (internality and universality are not defined by the labels usually used to define the ends of the dimension (eg global-specific, stable-unstable). This was because the categories were constructed specifically with the study questions in mind and, to avoid the need for more than two categories per dimension, the pole not of interest was merged with the middle region of each dimension. Thus for example globality was categorised as global-affecting all or most areas of life, the non global category including affecting some, few or one area of life. The label of "specific" would not seem appropriate to a category including an average rating labelled for individual items as "affecting some areas of life".

Here are some statements regarding the way people feel or think. The statements are grouped in 21 sections from A to U. One statement must be chosen from each section. You are requested to put a circle round the number of the statement which best describes how you have been during the past fortnight.

- A 0 I do not feel sad.
 1 I feel blue or sad.
 2a I am blue or sad all the time and I can't snap out of it.
 2b I am so sad or unhappy that it is very painful.
 3 I am so sad or unhappy that I can't stand it.
- B 0 I am not particularly pessimistic or discouraged about the future.
 1. I feel discouraged about the future.
 2a I feel I have nothing to look forward to.
 2b I feel that I won't ever get over my troubles.
 3 I feel that the future is hopeless and that things cannot improve.
- C 0 I do not feel like a failure.
 1 I feel I have failed more than the average person.
 2a I feel I have accomplished very little that is worthwhile or that means anything.
 2b As I look back on my life all I can see is a lot of failures.
 3 I feel I am a complete failure as a person (parent, husband, wife).
- D 0 I am not particularly dissatisfied.
 1a I feel bored most of the time.
 1b I don't enjoy things the way I used to.
 2 I don't get satisfaction out of anything any more.
 3 I am dissatisfied with everything.
- E 0 I don't feel particularly guilty.
 1 I feel bad or unworthy a good part of the time.
 2a I feel quite guilty.
 2b I feel bad or unworthy practically all the time now.
 3 I feel as though I am very bad or worthless.

- F 0 I don't feel I am being punished.
1 I have a feeling that something bad may happen to me.
2 I feel I am being punished or will be punished.
3a I feel I deserve to be punished.
3b I want to be punished.
- G 0 I don't feel disappointed in myself.
1a I am disappointed in myself.
1b I don't like myself.
2 I am disgusted with myself.
3 I hate myself.
- H 0 I don't feel I am any worse than anybody else.
1 I am very critical of myself for my weaknesses or mistakes.
2a I blame myself for everything that goes wrong.
2b I feel I have many bad faults.
- I 0 I don't have any thoughts of harming myself.
1 I have thoughts of harming myself but I would not carry them out.
2a I feel I would be better off dead.
2b I have definite plans about committing suicide.
2c I feel my family would be better off if I were dead.
3 I would kill myself if I could.
- J 0 I don't cry any more than usual.
1 I cry more now than I used to.
2 I cry all the time now. I can't stop it.
3 I used to be able to cry but now I can't cry at all even though I want to.
- K 0 I am not more irritated now than I ever am.
1 I get annoyed or irritated more easily than I used to.
2 I feel irritated all the time.
3 I don't get irritated at all at the things that used to irritate me.

- L 0 I have not lost interest in other people
 1 I am less interested in other people now than I used to be.
 2 I have lost most of my interest in other people and have little feeling for them.
 3 I have lost all my interest in other people and don't care about them at all.
- M 0 I make decisions about as well as ever.
 1 I am less sure of myself now and try to put off making decisions.
 2 I can't make decisions any more without help.
 3 I can't make any decisions at all any more.
- N 0 I don't feel I look any worse than I used to.
 1 I am worried that I am looking old or unattractive.
 2 I feel that there are permanent changes in my appearance and they make me look unattractive.
 3 I feel that I am ugly or repulsive looking.
- O 0 I can work about as well as before.
 1a It takes extra effort to get started at doing something.
 1b I don't work as well as I used to.
 2 I have to push myself very hard to do anything.
 3 I can't do any work at all.
- P 0 I can sleep as well as usual.
 1 I wake up more tired in the morning than I used to.
 2 I wake up 1-2 hours earlier than usual and find it hard to get back to sleep.
 3 I wake up early every day and can't get more than 5 hours sleep.
- Q 0 I don't get any more tired than usual.
 1 I get tired more easily than I used to.
 2 I get tired from doing anything.
 3 I get too tired to do anything.

- R 0 My appetite is no worse than usual.
1 My appetite is not as good as it used to be.
2 My appetite is much worse now.
3 I have no appetite at all any more.
- S 0 I haven't lost much weight, if any, lately.
1 I have lost more than 5 pounds.
2 I have lost more than 10 pounds.
3 I have lost more than 15 pounds.
- T 0 I am no more concerned about my health than usual.
1 I am concerned about aches and pains or upset stomach or constipation or other unpleasant feelings in my body.
2 I am so concerned with how I feel or what I feel that it is hard to think of much else.
3 I am completely absorbed in what I feel.
- U 0 I have not noticed any recent change in my interest in sex.
1 I am less interested in sex than I used to be.
2 I am much less interested in sex now.
3 I have lost interest in sex completely.

:: :: :: ::

This questionnaire concerns how often you have experienced certain feelings and symptoms. Please tick beneath the word that is nearest to how often you have experienced each feeling or symptom during the past fortnight.

	<u>daily</u>	more than once a week	once or twice	not at all
1. I get very frightened or panic feelings.				
2. I get palpitations or a sensation of butterflies in my stomach or chest.				
3. I worry about possible future problems.				
4. I am restless and cannot sit still.				
5. I get dizzy attacks and feel unsteady.				
6. I feel lacking in self-confidence.				
7. I feel scared or frightened.				
8. I feel miserable and sad.				
9. I feel worse in the morning than during the rest of the day.				
10. I feel insecure.				
11. I feel tense or wound up.				
12. I am bothered by headache, neck and back pains.				
13. I dwell on past unhappy experiences.				

This questionnaire concerns how strong or intense certain feelings or symptoms have been when you have been troubled by them. Please tick beneath the word that is nearest to how strong or intense, at its worse, each symptom or feeling has been if it has occurred during the past fortnight.

	<u>very</u>	<u>quite</u>	<u>a bit</u>	<u>not</u> <u>occurred</u>
1. I got very frightened or panic feelings.				
2. I got palpitations or a sensation of butterflies in my stomach or chest.				
3. I worry about possible future problems.				
4. I got restless and cannot sit still.				
5. I got dizzy attacks and feel unsteady.				
6. I feel lacking in self-confidence.				
7. I feel scared or frightened.				
8. I feel miserable and sad.				
9. I feel worse in the morning than during the rest of the day.				
10. I feel insecure.				
11. I feel tense or wound up.				
12. I am bothered by headache, neck and back pains.				
13. I dwell on past unhappy experiences.				

This questionnaire concerns how long certain feelings or symptoms persist when you are troubled by them. Please tick beneath the word that is nearest to how long each symptom or feeling has lasted, at the longest, if it has occurred during the past fortnight.

	<u>days</u>	<u>hours</u>	<u>minutes</u>	<u>not occurred</u>
1. I get very frightened or panic feelings.				
2. I get palpitations or a sensation of butterflies in my stomach or chest.				
3. I worry about possible future problems.				
4. I am restless and cannot sit still.				
5. I get dizzy attacks and feel unsteady.				
6. I feel lacking in self-confidence.				
7. I feel scared or frightened.				
8. I feel miserable and sad.				
9. I feel worse in the morning than during the rest of the day.				
10. I feel insecure.				
11. I feel tense or wound up.				
12. I am bothered by headache, neck and back pains.				
13. I dwell on past unhappy experiences.				

Appendix J

SYMPTOMS AND CURRENT CONCERNS INTERVIEW

1 Main Symptom:

Interviewer: "Could you please tell me what is the main emotional problem or symptom which you are seeking help for?"

"How long have you been troubled by this problem or symptom?"

(The subjects spontaneous reply is recorded and fed back to them to check that the wording is acceptable and accurate.)

2 Current Concerns:

Interviewer: 1 "Would you please tell me about the main problems or concerns which you are currently facing in your life such as regarding:

- your physical health
 - your work
 - your relationships especially within your family
 - your social life
 - your finances
- or anything else which concerns you currently?"

(All spontaneous replies are recorded.)

2 "Have there been changes in your life or upsetting events which you feel you have not come to terms with or got over yet?"

(All spontaneous replies are recorded.)

3 "Are there any problems which you expect to come up against in the future and have not either come to terms with or found a way of preventing?"

(All spontaneous replies are recorded.)

NB In this section only /external" problems or concerns in the person's life were included, not concerns about the person themselves except for physical illness. Thus symptoms, feelings and personal qualities could be excluded.

Each of the concerns identified above is written as a single statement on a card, taking care to clarify what is the precise concern. Where the concern is with the absence of a desirable state of affairs, the statement should be in the form of a negative eg "not having a part-time job".

The interviewee is then asked to rank the cards in order of current importance to them. For each of the top three ranking concerns the duration of the concern is elicited. Concerns of less than a months duration were excluded and replaced.

For each of the top three ranking current concerns and main symptoms two questionnaires, CEEQ(P) and CEEQ (F), are completed by the interviewee.

6 If this problem has decreased:

How much has this change been due to your actions?

not at all little moderately considerably totally

or

If this problem has not decreased:

How much could it have been reduced by actions you could have taken but didn't?

not at all little moderately considerably totally

* By other people I mean people you would normally compare yourself with.

APPENDIX K (11)

QUESTIONNAIRE CEEQ(F)

This questionnaire concerns your views about what will happen regarding the problems stated below. There are no right or wrong answers. I am only interested in what you think. Please tick the answer which is closest to what you think.

Problem:

1 How much do you expect this problem to decrease?

totally considerably moderately little not at all

2 How much will the solution to this problem depend on something about you (eg your capabilities, personality, mood, actions) rather than circumstances or other people?

entirely mostly partly myself mostly entirely
circumstances circumstances partly circumstances myself myself
or other or other people or other people
people

3 How much would other people*, in your situation, be able to reduce this problem?

not at all little moderately considerably totally

4 How important is it that this problem ceases?

very considerably moderately a little not at all
considerably important important important important
important

5 How much should you be able to reduce this problem?

not at all little moderately considerably totally

6 How much will you be able to reduce this problem by your actions

totally considerably moderately little not at all

7 How likely it is that this problem will cease sometime in the foreseeable future?

not at unlikely quite likely very likely definitely
all likely

* By other people I mean people who you would normally compare yourself with.

Appendix L

ATTITUDE TO SYMPTOM QUESTIONNAIRE

This questionnaire concerns your beliefs and attitudes concerning the main symptoms and feelings which you are seeking help with.

- 1 What are the main symptoms, feelings or emotional problems which you are seeking help with?

1

2

3

4

For each of the following questions please tick the answer that is closest to what you think. All the questions concern the main symptoms you have identified above.

- 2 During the past two weeks how distressing has the main symptoms or feelings been?

not at all distressing

a little distressing

moderately distressing

considerably distressing

very considerably distressing

- 3 Are the main symptoms or feelings caused by the problems you are facing in your life or by what has happened to you (eg financial problems, marital, family, work, etc)?

entirely caused by problems I have faced or am facing

mostly caused by problems I have faced or am facing

partly caused by problems I have faced or am facing

a little caused by problems I have faced or am facing

not at all caused by problems I have faced or am facing

4 To what extent do you feel that you are responsible for the main symptoms or feelings?

entirely responsible for these symptoms and feelings
mostly responsible for these symptoms and feelings
partly responsible for these symptoms and feelings
a little responsible for these symptoms and feelings
not at all responsible for these symptoms and feelings

5 To what extent are the main symptoms and feelings caused by your personality and emotional make-up?

not at all caused by my personality or emotional make-up
a little caused by my personality or emotional make-up
partly caused by my personality or emotional make-up
mostly caused by my personality or emotional make-up

6 Are the main symptoms or feelings caused by a physical medical problem or by a psychological or emotional problem?

entirely by a psychological or emotional problem
mostly by a psychological or emotional problem
partly by a psychological or emotional problem, partly a physical medical problem
mostly by a physical medical problem
entirely by a physical medical problem

7 To what extent is the main symptoms or feelings caused by what you have done in the past?

entirely caused by what I have done
mostly caused by what I have done
partly caused by what I have done
a little caused by what I have done
not at all caused by what I have done

8 Compared with other people, how much do you think you have done to improve the main symptoms or feelings?

much more than other people
a little more than other people
as much as other people
a little less than other people
much less than other people

9 To what extent do you feel that you are responsible for bringing about whatever changes are needed to improve your main symptoms or feelings?

not at all responsible for these changes
a little responsible for these changes
partly responsible for these changes
mostly responsible for these changes
entirely responsible for these changes

10 To what extent do you believe that the improvement of your main symptoms or feelings depend on some kind of physical medical treatment (eg drugs, ECT)?

entirely depends on a physical medical treatment
mostly depends on a physical medical treatment
partly depends on a physical medical treatment
a little depends on a physical medical treatment
not at all depends on a physical medical treatment

11 To what extent do you believe that the improvement of your symptoms or feelings depend on what you do?

does not depend at all on what I do
depends a little on what I do
partly depends on what I do
mostly depends on what I do

12 How much do you think (not hope) that your main symptom or feeling will improve in the foreseeable future?

likely to improve completely
likely to improve considerably
likely to improve moderately
likely to improve a little
not likely to improve at all

13 How much do you think you will be able to improve your main symptoms or feelings by something you can do?

I will not be able to do anything to improve my main symptom or feeling
I will do something to improve my main symptom or feelings a little
I will do something to improve my main symptom or feelings moderately
I will do something to improve my main symptom or feelings considerably
I will do something to improve my main symptom or feelings completely

Appendix M

CRITERIA FOR CLASSIFICATION OF SUBJECT BY PRESENTING SYMPTOM TYPE

Specific Neurotic Symptoms

A relatively specific neurotic symptom including:

tiredness
a somatic symptom
anxiety/tension
obsessional thought
phobias
headaches
panic attacks

Diffuse Emotional Symptoms

One or more diffuse emotional symptom including:

feeling low
unable to cope
lack of self confidence
irritability
loss of energy
loneliness
relationship difficulties