CHAPTER - 2

REVIEW OF THE LITERATURE
The arguments advanced in the introductory chapter deepen our impression that helplessness is negatively related with the quality of our life. The construct of helplessness is very general and its effects percolate to several domains of our life. The concept of controllability lies at the core of helplessness. The perception of control has been related to a wider range of behaviour (Langer, 1983). The conceptual and applied nature of this construct could be adequately evaluated only when empirical studies from representative areas are properly sampled.

Attribution and Depression

Recently, depression has been conceptualized as a cognitive phenomenon (Beck, 1967, 1976; Beck, Rush, Shaw & Emery, 1979). Contemporary theorists have further suggested that depressive symptoms might be understood in terms of causal attributions depressives make for the good and bad events in their lives (e.g., Abramson et al., 1978, Gong-Guy & Hammen, 1980; Ickes & Layden, 1978; Peterson, 1979; Rizley, 1978; Seligman, Abramson, Semmel, & Von Baeyer, 1979). These attributional accounts of depression claim that internal attributions for bad events are associated with depressive symptoms. Janoff-Bulman (1979) recently argued that only one kind of internal attribution for bad outcomes is necessarily correlated with depressive symptoms.

According to the learned helplessness model of depression, the core depressive cognition is the expectation that outcomes and one's responses will be independent of each other (Seligman, 1975). This expectation results in the motivational, cognitive, and emotional deficits characteristic of
depression. In a recent reformulation, Abramson et al. (1978) proposed that depression is potentiated when uncontrollable bad events are seen as internally, stably, and globally caused. If such attributions are habitual, an attributional "style" that predisposes one to depression can be spoken of (Seligman, et. al., 1979). Empirical research (reviewed by Abramson et. al., 1978, & Peterson & Seligman, 1984) suggests that the debilitating effects of uncontrollable bad events may be governed by subjects' attributions.

In contrast to the vast literature on adult depression, relatively little attention has been paid to depression in children, probably because some theorists doubt the very existence of childhood depression (e.g., Lefkowitz & Burton, 1978). However, Cantwell and Carlson (1979) observe that one should look "for the clinical picture of depression in children in a way analogous to the way it is looked for in adults" (p.526). Recent research starting from this assumption agrees about this clustering of depressive symptoms in children, and shows that these symptoms can be reliably measured (e.g., Cantwell & Carlson, 1979; Lefkowitz & Tesiny 1980; Schulterbrandt & Raskin, 1977).

Kovacs and Beck (1977), for instance, developed the Children's Depression Inventory (CDI), a self-report questionnaire modelled after the adult Beck Depression Inventory (BDI; Beck, Ward, Mock, Mendelson, & Erbaugh, 1961), a frequently employed and well validated (Beck, 1967; Bumberry, Oliver, & McClure, 1978) measure of depressive symptoms.
With these measures Seligman et al. (1982) found that depressive symptoms in children correlated with an insidious attributional style.

In another study (Seligman et al., 1984), attributional style was measured in children with an instrument developed for this purpose. By a forced-choice technique, scores were obtained for the tendency to explain good or bad events with internal (as opposed to external) causes, with stable (as opposed to unstable) causes, and with global (as opposed to specific) causes. Depressive symptoms were measured with the CDI. According to the reformulated learned helplessness hypothesis, children with depressive symptoms should be inclined to make more internal, stable, and global attributions for bad events than their nondepressed peers. The learned helplessness model does not make an unequivocal prediction about depression and attributions regarding good events, but the research with adults (Seligman et al., 1979) suggests that external, unstable, and specific attributions for good events might be associated with depressive symptoms.

The second purpose of this study was to see whether attributional style precedes, "causes", or is a "risk factor" for depressive symptoms in children. The laboratory data reviewed by Abramson et al. (1978), Miller and Norman (1979), and Peterson and Seligman (1984) imply that attributional style is a risk factor for adult depression, and the studies showing that attributional style correlates with depressive symptoms are not inconsistent with a causal hypothesis (Peterson & Seligman, 1984).
It is possible to decide questions of causal priority among nonmanipulated variables, at least tentatively, by using a longitudinal design and cross-lagged correlational analysis (Campbell & Stanley, 1963; Kenny, 1975). The measures of depressive symptoms and attributional style were therefore taken at each of two times, and the cross-lagged correlations between depression and attributional style were computed. So, children's depressive symptoms were measured and their attributional style at two intervals separated by a six months to test whether attributional style is a risk factor for depressive symptoms.

Again, the question very often arises whether the children learn their attributional style from their parents. However, attempts have been made to gather preliminary evidence about the origins of attributional style by comparing the attributional styles of parents and their children, as well as comparing their depressive symptoms.

Mother's attributional style for bad events and depressive symptoms correlated with her child's corresponding attributional style and her child's depressive symptoms. This pattern is relevant to the learned helplessness model of depression in several ways. First, the central role it assigns to attributional style is supported, since attributional style was closely linked to the report of depressive symptoms, both by mother and child. Second, the results imply that the origins of attributional style may be in part familial (Cantwell & Carlson, 1979). Third, because the attribution-attribution correlation was as robust as the depression-depression
correlation, attributional style is probably more than a more by-product of depression.

The results invite the speculation that the vicious circle describing the intrapsychic functioning of the depressive (Beck, 1976) may be embedded within an interpersonal vicious circle. The child may learn attributional style (or depressive symptoms) from its mother, and then the depressions of mother and child may maintain each other, particularly when each possesses the insidious attributional style. If so, the currently popular individual therapies used with depressives might be supplemented with family therapy, as has been done with other disorders in which family inter-action is causal. More generally, the present results suggest that the depressed child is apt to be found in a family in which the mother is also depressed, and a depressed mother may well have a depressed child at home.

That father's depression and attributional style were not related to those of their wives or children may be due to the fact that mothers probably spend a good deal more time with the children than do fathers. In addition, Brown and Harris (1978) have argued that lack of social support is important in the development of depression, so perhaps the support for the women and children is the family, while for the men, it is work or peer-based.

The mechanisms by which mothers and children converge on attributional style and depressive symptoms is a matter of speculation. Kelly's
(1973) attribution theory proposes that attributions result from the abstraction of causal relationships from actual events or from already abstract motions about causal relationships. Thus, the reason children and mothers have similar styles may be common experiences or common lore, but imitation is also likely.

According to the helplessness reformulation, individuals have a characteristic way of explaining bad events. They are consistent in the way they use internal (versus external), stable (versus unstable), and global (versus specific) causes to explain bad events. If this explanatory style regularly invokes internal, stable, and global causes, then the person will tend to become depressed when bad events occur. This is the central prediction of the reformulation; there are several converging evidence in support of this prediction.

In recent years attempts have been made to manipulate these attributions variables in laboratory settings. This has help to avoid the possible confound amongst these attributional dimensions.

In an investigation (Alloy, Peterson, Abramson, & Seligman, in press), college students were split into global versus specific scorers for bad events on the Attributional Style Questionnaire (ASQ, Peterson et al., 1982). Subjects received one of three pretreatments as described by Hiroto and Seligman (1975): a condition in which button-pushing terminated an aversive noise delivered through headphones (escapable), a condition in which the noise could not be terminated (inescapable), and a condition
in which no noise-escapable or inescapable was experienced (no pretreatment). Then, subjects were given one of two test tasks: a task similar to pretreatment a series of solvable anagrams. According to the reformulation, all subjects should show deficits following inescapable noise when tested on the similar noise task; however, only subjects with a global explanatory style for events should show deficits following inescapable noise when tested on the dissimilar cognitive task. These predictions were supported. Further, the differences remained even when internality and stability scores were covariates.

This study experimentally manipulated bad events, and also looked at a specific role assigned to one of the explanatory dimensions. In an analogous but more preliminary investigation (Peterson & Seligman, 1981), they obtained some evidence that stability for bad events is related to the time-course of laboratory-induced helplessness as predicted by the reformulation.

Pasahow (1980) manipulated the global specific dimension and imposed bad events on in the learned helplessness triadic design. The subjects instilled with a "global" explanation were given written instructions which told them that the concept identification task they were about to take correlated very highly with how people performed on all psychology experiment tasks. "Specific" subjects were given written instructions which described the task as a concept formation task that had little or no correlation with other tasks used in psychology experiments.
All subjects were then given unsolvable concept identification problems and then tested on anagrams. Subjects induced to make global explanations for their failure performed worse on the anagrams than subjects encouraged to give specific explanations. This suggests that the manipulation of explanations along the global-specific dimension for bad events appropriately predicts poor performance when bad events are imposed on subjects.

Thus, there is converging evidence about the globality dimension for bad events. In the Alloy et al. (in press) study, pre-existing explanatory style was merely measured and the bad events manipulated. Pre-existing global style for bad events predicted failure at new problems once the bad event occurred, whereas specific style did not. In parallel, if causal explanations are themselves manipulated along with the bad event, Pasahow (1980) showed that the same results hold.

Abramson (1977) performed an analogous experiment that looked at self-esteem. In this study, nondepressed volunteers at the University of Pennsylvania were given escapable noise, inescapable noise, or nothing. Inescapable noise was delivered with one of three sets of accompanying instructions. In one group, no instructions were given, the usual way a helplessness experiment is performed. In the second group (universal helplessness), subjects were given norms which told them that most University of Pennsylvania students failed this task. This was an attempt, like that of Pasahow (1980), except along the internal dimension, to induce a
particular causal explanation for failure, in this case, an external cause. The final group (personal helplessness) was given a manipulation designed to induce an internal causal explanation for failure: they were told that most Penn students solved the problem.

After noise, all groups were measured on self-esteem changes and performance deficits in the hand shuttle box. As predicted, all these helplessness groups showed problem-solving deficits; they did poorly escaping noise. In contrast, the universal helplessness (external causal explanation) group did not show self-esteem loss, whereas the personal helplessness (internal causal explanation) group and the no instruction group did show self-esteem deficits. This experiment shows that when explanations are manipulated along the internality dimension, the predictions of the theory hold. A manipulation designed to produce internal causal explanations lowers self-esteem and produces helplessness, while a manipulation designed to produce external causal explanations does not lower self-esteem, although it does produce performance deficits.

According to the reformulation, explanatory style is a risk factor for depression (Peterson & Seligman, 1984). To be a cause, it must precede the occurrence of depressive symptoms. Because cross-sectional studies are momentary, they cannot address this prediction. However, several longitudinal investigations have been conducted in which explanatory style was assessed at one time, and consequences at a later time.

As predicted by the reformulation, the depressive explanatory style for bad events was correlated with subsequent depressive symptoms, even
when initial CDI scores were partialled out. So, explanatory style for bad events may be a risk factor for depression among children.

This study has at least one limitation. It used children as subjects. However, several recently completed studies using adults also address the risk factor question. Golin, Sweeney, and Shaeffer (1981) and Firth and Brewin (1982) administered measures of both explanatory style and depressive symptoms at two times. They then employed cross-lagged panel correlational analysis to see if explanatory style preceded depression. This statistical technique compares the correlation between variable A at Time one and variable B at Time Two with the correlation between variable B at Time One and variable A at Time Two (Kenny, 1975). If the former correlation significantly exceeds the latter, causal priority of variable A is suggested.

Cross-logged procedures are controversial (Rogosa, 1980). Further, they pose a stronger test of the helplessness reformulation than the model claims. The reformulation proposes that causal explanations affect subsequent depression. It does not deny that depression may change explanations, nor does it expect that the influence of explanation on depression is more powerful than the influence of depression on subsequent explanation. Be this as it may, both studies provided support for the strong claim that explanations affect depression to a greater degree than depression affects explanations. In the Golin et al. (1981) study, causal priority of stability and globality for bad events was demonstrated for 180 college students over a one-month period. In the Firth and Brewin (1982) study,
causal priority for stability for bad events was shown for 16 female patients over a five-week period. In neither case was there support for the opposite conclusion that level of depression affected subsequent causal explanations.

In another longitudinal study, O'Hara, Rehm, and Campbell (1982) administered the ASQ to 170 women in their second trimester of pregnancy, along with several other cognitive-behavioral assessments. The strongest predictor of level of depression three months postpartum was explanatory style for bad events, which significantly correlated with BDI scores even when prepartum level of depression was held constant.

These four studies support the prediction that depressive explanatory styles precede depressive symptoms. Explanatory style may be a risk factor for later depression, allowing identification of individuals at risk by the way they explain bad events. Primary prevention of depression should then be focused on such individuals.

Several investigations of the hypothesis that depressive symptoms correlate with the use of internal, stable, and global causes to explain bad events have been undertaken. These studies are cross-sectional, and employ a variety of populations, using the Attributional Style Questionnaire.

The helplessness reformulation purports to be a general theory which should give sufficient conditions for depression across the life-span (Seligman & Peterson, 1981). Explanatory style should correlate with depressive
symptoms among children in the same pattern as among adults. Accordingly, an investigation was conducted to see if the depressive explanatory style characterised depressed children (Seligman et al., 1984).

Ninety six children from two Philadelphia elementary schools, which consisted of predominantly of white middle-class children, were tested. Approximately equal numbers of boys (n = 50) and girls (n = 46), and third, fourth, fifth, and sixth graders participated. The subjects completed the CDI and a Children's Attributional Style Questionnaire (CASQ). During classtime, the researcher read the questionnaire aloud while the children silently read their copies at the same time. The questionnaires were completed twice by the same children, at an interval of six months.

The CDI is a 27-item questionnaire that measures the severity of emotional, motivational, cognitive, and somatic symptoms of depression. Each item consists of three self-report statements graded in severity from 0 to 2. The child is instructed to choose the option corresponding to how he or she has been feeling during the last two weeks.

The CASQ is a forced-choice instrument. It was found in the pilot work that young children had trouble with the adult ASQ, particularly with dimension of globality. Hence, forced-choice format was used, in which hypothetical good or bad events involving the child were followed by two possible explanations, which varied one of the explanatory dimensions while holding the other two constant. The child chooses the cause from the pair that better describes why the event occurred Sixteen
questions pertain to each of the three dimensions; half refer to good
events, and half to bad events. Thus, the 48 questions consist of 8 items
for each of the factorial combinations of internal-external, stable-unstable,
global-specific and desirability of event (good, bad).

The CDI Scores were highly reliable and highly consistent over the
six months, implying that childhood depression, at least as measured here,
was not a transient phase (Tesiny & Lefkowitz, 1982). As predicted,
explanatory style correlated with depressive symptoms. The explanation
of bad events with internal, stable and global causes covaried with CDI
scores, as did the reverse style for good events. Considering the modest
reliabilities of the CASQ, these correlations were substantial; depression
among school children was closely tied to the causal explanations they
picked.

This study broadens the empirical base of the depressive explanatory
style by showing it among 9 to 13 year-old children. It also adds to the
evidence that childhood depression is a coherent syndrome similar to
depression among adults, not just at the symptom level, but also in terms
of explanatory style.

The ideal way to test the helplessness reformulation is to measure
the explanatory style of individuals, and then choose at random half of
these individuals to experience some important bad event. The most
depression is predicted to ensue for subjects with the pre-existing depres­
sive explanatory style who also then experience the bad events. The
obvious ethical dilemma can be partly solved by a quasi-experimental method in which naturally-occurring bad events are the "manipulation". In this study, the bad event was imprisonment in a penitentiary.

A recent review of psychological reactions to imprisonment concluded that they are "idiosyncratic" (Bukstel & Kilman, 1980). Sometimes prisoners undergo psychological deterioration and sometimes they do not. One reason for this inconsistency may be the failure to look at theoretically motivated individual differences. Although omnibus personality inventories like the MMPI have frequently been administered in research on imprisonment, rationales for doing so have been absent (Bukstel & Kilman, 1980). In contrast, there is reason to expect the explanatory style may predict the effects of imprisonment on depression.

For most prisoners, imprisonment is unarguably a bad event. Further, like any total institution, prisons deny individuals' control over even the most mundane aspects of their lives (Goffman, 1961; Taylor, 1979). Then it would be expected that a common reaction to imprisonment is depression (Seligman, 1975). Further, it is predicted that prisoners with the depressive explanatory style are the most likely to become depressed after internment (Abramson et al., 1978). Upon imprisonment individuals completed the Attributional Style Questionnaire, and shortly before release, these same individuals completed the Beck Depression Inventory (BDI).

Within one week following imprisonment at one of four maximum security prisons in New York, Ohio, and Pennsylvania, 245 adult males completed the ASQ. Within one week before their release, which varied
from one month to a year, they completed the BDI. For 28 prisoners, BDI scores from the time of initial imprisonment were available. These averaged only 1.68, suggesting that subjects were not at all depressed at the time of imprisonment.

At the end of their imprisonment, prisoners scored an average of 17.7 on the BDI, placing them in the "moderately to severely depressed" range (Beck, 1967). Further, their depressive symptoms at the end of imprisonment were strongly associated with their explanatory style at the beginning of imprisonment. As expected, internal, stable and global explanations for bad events were positively correlated with depressive symptoms. Surprisingly, so too were internal, stable, and global explanations for good events. Unlike other research, explanatory styles for bad versus good events did not have opposite effects on depression. Further, unlike other research, explanatory styles for bad versus good events were not independent. Instead, they were substantially intercorrelated.

Although most prisoners became depressed during prison, the most severe depressive symptoms were reported by those who habitually explained events—both bad and good—with internal, stable, and global causes. This study lacked a comparison group of individuals similar (in age, sex, class, and race) to these prisoners except for in incarceration, so the conclusions suggested by the findings are tentative. However, the generality of findings across different prisons and their convergence with the results of the more carefully controlled midterm study suggests that explanatory style may be a risk factor for depression when bad events are encountered.
The final line of evidence comes from the study of individual lives. It converges on the proposition that explanatory style is a risk factor for depressive symptoms. One major barrier in trying to study the consequences of explanatory style in the laboratory or in natural settings is the obtrusive and reactive nature of questionnaires. The development of a valid method for assessing explanatory style by the content analysis of written transcripts allows us to study, in a wholly unobtrusive and nonreactive way, the natural history of explanatory style and depression.

In the first study (Peterson & Seligman, 1981) causal explanations for bad events were extracted from 300 words segments from verbatim transcripts of individual psychotherapy sessions at the beginning, middle, and ending of successful psychotherapy with four patients suffering depression following a loss. As in other content analytic work, explanations for internality, stability, and globality were rated, and averaged these scores across explanations offered within the same session. For each patient, explanatory style perfectly ordered the three sessions; the most internal, stable, and global explanations were offered in the beginning session, while the least internal, stable, and global explanations were offered in the ending session, when depression was better. These data supplement the Persons and Rao (1982) study already described in suggesting that changes in explanatory style index changes in depression during psychotherapy.

In another study of individual lives over decades analyzed material in the Berkeley-Oakland Growth Study (Elder, Bettes, & Seligman, 1982),
an ongoing investigation of the effects of the Great Depression on family and life patterns (Elder, 1974). Causal explanations were extracted from the open-ended responses of 24 women who described the worst events during the preceding year in both 1943 and 1970. The focus of this study was on hopelessness the use of stable and global causes to explain bad events-so these explanations were rated for stability and globality, but not internality. A hopeless outlook in 1943 significantly correlated with a hopeless outlook in 1970, through which it affected overall psychological health in 1970.

Thus, studies of depression in children evince parallels between children's depressive symptoms and their attributional styles. The results also indicate the possibility of association between children's depression and attributional style of their mothers. However the possibility of transmission of parent's attributional style to their children needs further investigation.

Domains of Application

Human helplessness research has expanded beyond the experimental laboratory. The application has been extended to classroom, psychiatric clinic, medical hospitals, and nursing homes. Investigators from the various areas of social science have applied the theoretical concepts of uncontrollability and helplessness to such diverse phenomena as a depression and therapy, academic achievement and sex differences, coronary proneness and personality, aging and death and victimization and bereavement. In
1975, Martin Seligman wrote the first book on this topic to explicate the theory of learned helplessness and to suggest its potential application to such human problems as a depression, development, and death. Since then, interest and research in human helplessness has grown considerably.

A wide variety of areas of application brings home its link with the quality of life. Although the centre of gravity has been shifted to the negative consequences of helplessness, a basic understanding of this consequences is useful for improving the quality of life. Prior to explaining the role of mechanisms that mediate between helplessness and specific negative outcomes, an explication of these specific domains of application is essential.

**Disease Susceptibility**

For some time now, psychologists have known that it is not events themselves that cause stress, but rather the views one takes of those events. That is, our own subjective reality largely determines the way the world impinges on us, rather than objective reality. The full import of this idea, however, has only recently become felt among the scientific community with respect to the aged. In the past decade, researchers have been devoting extensive study to the importance of perceived control over events in one's life. One focus of research has been the importance of this variable in appreciating the problems of the elderly. Much research in this area suggests that the belief that one can affect outcomes relevant to one's own life is of paramount importance to
psychological and perhaps even physical health. Interestingly, this has been shown to be true regardless of whether or not such belief in fact reflects the reality of control.

The early psychological experiments in this field focused on the effect of negative outcomes in producing these feelings of helplessness. People typically were put in situations where they were going to experience some aversive event over which they had no control. To make the appropriate comparisons, other people in these studies were made to experience the same aversive consequence, but were led to believe that they were doing so by choice. Thus the same negative outcome was experienced by the two groups and all that differed between them was their belief about their control over the outcome (Glass & Singer, 1972). One group believed they could control the outcome, the others believed they couldn't. In virtually all of the studies of this type, although neither group exercise control, the group that believed that control was possible experienced less stress.

In other studies subjects were given prior experience with uncontrollable negative outcomes in which their attempts to terminate the negative consequences were repeatedly met with failure (Seligman, 1975), no matter what they did they were unsuccessful. After this experience, they were then placed in second situation where control was possible. The prior experience with uncontrollability led people not to exercise control in this second situation even when control was possible. They have learned
that responding was futile and hence they gave up and became passive. However, they were giving up in situations in which giving up was clearly maladaptive. Comparison groups not given the prior experience with uncontrollable outcomes readily exercised control in the second situation. It would seem that much passivity and giving up in general were a result of prior experience with loss of control.

Stress has been defined as an internal state that occurs when an individual confronts a threat to his or her physical and/or psychic well being (Lazarus, 1966). Implicit in this definition is the assumption that the internal state can be inferred by physiological, self-report, and overt behavioural measurements for example, increased or decreased heart rate, inability to concentrate, or impaired interpersonal relations.

Stressful life events, including job dissatisfaction, economic frustration, and excessive work and responsibility, all appear related to the risk of coronary disease (House, 1975; Jenkins, 1971). The jobs of people at high risk generally entail a high degree of responsibility for others, work overloads, and role conflicts, among other stresses. Unhappiness in nonoccupational areas such as marital and family relations has also been implicated in the occurrence of coronary disease, and acute stressors over which the individual has little control—for example, the sudden death of a spouse—have been correlated with the subsequent onset of cardiac disorders in the surviving spouse (e.g., Parkes, Benjamin, & Fitzgerald, 1969).
To the extent that stress plays a role in pathogenesis of cardiovascular disease, its contribution probably occurs by affecting the physiological and neurohumoral mechanisms involved in the initiation and development of atherosclerotic plaques and/or sustained elevations in blood pressure. Recent research suggests what some of these physiological and neurohumoral mechanisms are (Eliot, 1974; Friedman, 1969; Rosenman & Friedman, 1974). They include increases in cholesterol, acceleration of the rate of damage to the intime (inner layer) of the coronary arteries over time, and facilitation of the aggregation of blood platelets (i.e., substances found in the blood that are important in coagulation), which are then incorporated into arterial plaques and contribute to narrowing of the coronary vessels and subsequent myocardial infarction. As an illustration of this physiological mediation, research that documents an association between cholesterol level in the blood and stressful life events may be considered. In this research, tax accountants were found to have significantly higher serum cholesterol levels during the first two weeks in April (prior to the April 15 tax deadline in the U.S.A.) than during the months of February and March, and their average cholesterol level fell sharply after April 15 (Friedman, Rosenman, & Caroll, 1958). These findings have been replicated several times, using a variety of procedures for inducing stress.

Stress may also contribute to coronary disease through the body's nonspecific reactions to aversive stimulation. It is widely agreed that such stimulation leads to discharge of the sympathetic nervous system
and related hormones such as adrenalin and non-adrenalin (Mason, 1972). These hormonal substances, collectively termed catecholamines, are secreted from the adrenal medulla and, in the case of non-adrenalin, from sympathetic nerve endings as well. There is evidence that catecholamines may have special significance in the development of coronary disease. It is well-known that these neurohumoral substances elevate blood pressure, and some research indicates that adrenalin and noradrenalin can accelerate the rate of arterial damage and indeed induce myocardial lesions (e.g., Raab, Stark, Macmillan, & Gigee, 1961; Raab, Chaplin, & Bajusz, 1964). Catecholamines also potentiate the aggregation of blood platelet, and the release of platelet contents is considered to be an important factor in atherogenesis as well as in the genesis of thrombosis (Ardlie, Glew, & Schwartz, 1966; Duguid, 1946; Theorell, 1974). It follows from this that any psychological agent that increases catecholamines in the blood may be a potential pathogen for cardiovascular function. Thus, since psychological stressors enhance the release of adrenalin noradrenalin, stress may be related to coronary disease because of its generalized effects on the sympathetic nervous system and adrenal medulla.

Coping with Undesirable Life Events

At some crucial point of life, people encounter stressful events that can have a major impact in the course and direction of their lives. They or those they love may be confronted with a disabling accident, serious illness, death, or violent crime. But how do they react to such situations? Although these studies have been conducted by investigators
from many different theoretical orientations, they have focused primarily on two distinct issues. The first concerns specific factors that may reduce a person's subjective distress when an aversive event is encountered, such as whether the stressful event is predictable or controllable (e.g., Geer, Davison, & Gatchel, 1970; Pervin, 1963), or whether preparatory information is provided (e.g., Lanzetta & Driscoll, 1966; Staub & Kellet, 1976). A second issue concerns the conditions under which exposure to unpleasant outcomes results in undesirable after effects.

Despite the experimental control afforded by a laboratory approach, surprisingly few replicable findings have emerged, and a number of basic questions remain unanswered. Because of the problems inherent in applying laboratory research to the issue of how people respond to undesirable life events, it was important to broaden the focus by examining data collected in natural settings. Limited work in social psychology have been considered and have also turned to related disciplines such as medicine, clinical psychology, psychiatry, sociology, and social work. In each of these areas, reactions to specific life crises, including acute, chronic, and life-threatening illness, physical disability, separation, bereavement and criminal victimization have been examined.

The particular means of coping employed by an individual may alleviate the problem or reduce the resulting distress, and may thus be considered effective coping. However, coping responses may also exacerbate the problem or may become problems themselves (e.g., alcohol or
drug abuse). During the past several decades, many theoretical approaches have been proposed that have potential relevance for understanding reactions to undesirable life events.

Klinger's (1975, 1977) major interest concerns how people become committed to and disengaged from various incentives or goals. Drawing from his clinical background, as well as many other areas in psychology, he argues that commitment to a goal influences a person's patterns of attention, information processing, and thought content. Klinger maintains that when an aversive life event removes or blocks a particular goal, individuals go through a process of disengagement in which their cognitions, feelings, and behaviours unfold in an orderly and predictable sequence.

According to this theory, a person initially responds to obstacles or to threatened loss of a goal with increased vigour. Efforts to achieve the goal may become more powerful and/or rapid, and concentration may become more intense. If these initial responses are unsuccessful in obtaining the incentive, however, the person becomes increasingly frustrated and angry, and his or her behaviour becomes more stereotyped, primitive, and often more aggressive. This phase may be characterized by disbelief or angry protest. After sustained but unsuccessful activity to achieve an outcome, however, individuals begin to abandon their pursuit. Individuals who are attempting to cope with a major life crisis may be particularly vulnerable to the effects of additional problems. Conversely, people faced with a large number of other problems may be especially vulnerable to life crises.
Although Wortman and Brehm (1975) were working on an entirely different set of problems, they developed a model with some similarities to Klinger’s invigoration depression sequence. As social psychologists, Wortman and Brehm were quite interested in how people respond when their freedom or control is taken away. Brehm (1966) had developed a theory of psychological reactance that suggested that when free behaviour is restricted, people respond with feelings of hostility, anger, and enhanced motivation to obtain the outcome in question. This theoretical work, and the research supporting it, appeared to be inconsistent with the learned helplessness model (Seligman, 1975). This approach predicts that individuals who are exposed to uncontrollable outcomes become passive and depressed, and show subsequent motivational deficits and impairments in active problem-solving. Unlike Klinger, however, Wortman and Brehm do not assume that invigoration will generally precede depression. They have attempted to incorporate mediating variables which will determine whether invigoration or depression will occur, and how intense or long-lasting these responses will be.

Like Wortman and Brehm’s (1975) model, the learned helplessness model was originally developed to account for laboratory data on reactions to uncontrollable outcomes, rather than to explain reaction to life crises. Of course, the original helplessness model predates the theoretical statements of Klinger as well as Wortman and Brehm (Seligman, Maier, & Soloman, 1971). This approach had its origin in Seligman’s work on Pavlovian fear conditioning with infrahuman species, where it was discovered
that exposure to uncontrollable shocks resulted in subsequent passivity and performance deficits (Overmier & Seligman, 1967; Seligman & Maier, 1967). When investigators began testing the model on human subjects, however, the findings were inconsistent. Exposure to insoluble problems or uncontrollable noise bursts or shocks did not always result in passivity, performance decrements, or depressed mood as the model would predict.

On the basis of these data, investigators began to speculate that helplessness effects may stem not from the uncontrollability of an aversive stimulus, but from the way in which the stimulus is interpreted by the subject (Dweck & Wortman, 1980). The way an interpretation of an aversive stimulus affects reaction to uncontrollability has already been discussed in the context of current formulation of the helplessness model.

In 1975, Shontz, on his book on psychological aspects of physical illness and disability, drew from his experience in rehabilitation and health settings to delineate a general model of reaction to crisis. Like Klinger, as well as Wortman and Brehm, Shontz maintains that individuals go through a series of stages as they attempt to cope with an aversive outcome. However, the sequence he proposes is quite different from that outlined by others. Unlike the theorists described previously, Shontz considers the ways in which individuals respond to and interpret information prior to the onset of a crisis. As the symptoms or problems become more pressing, however, people realize that their existing patterns of adjustment are inadequate, and experience considerable anxiety and stress.
Lazarus has been a major contributor to our understanding of the coping process of the past two decades. His earlier theoretical and empirical work (e.g., Lazarus, 1966; Lazarus & Alfert, 1964; Lazarus, Averill, & Opton, 1974; Speisman, Lazarus, Mordkoff, & Davison, 1964) has focused on how a person’s cognitive appraisal of a stressful situation influences the emotional responses that are elicited, the coping strategies that are employed, and the ultimate success of a person’s adjustment to the crisis. He maintains that individuals appraise the significance of the situation for their well-being, as well as the coping responses at their disposal for dealing with the harm, or regard it as a challenge and focus on the potential for mastery or gain (Coyne & Lazarus, in press; Lazarus & Launier, 1978). Lazarus has also emphasized that in addition to overcoming the crisis, coping responses may be directed toward controlling or regulating one’s emotional reaction to the situation. For the most part, the other theorists have restricted their discussion to coping mechanisms directed toward the crisis itself.

Old Age Problems

Ageing is characterized by losses in almost every domain important for an individual’s view of him or herself. Almost everyone experiences declines in physical and psychological functioning as one approaches the sixth, seventh, and eighth decades of life. Some declines can be compensated for by the use of external aids such as eyeglasses and hearing aids or by strategy shifts such as greater cautiousness. However, although these compensatory mechanisms might make an aged person functionally
equivalent to a younger person, their very need underscores the reality of the deficits. The impact of each specific deficit may in fact be minor, but the combined effect of many losses may induce feelings of lack of control and helplessness.

Schulz (1976) hypothesized that some of the characteristics frequently observed among the institutionalized aged, such as feelings of depression and helplessness as well as accelerated physical decline are, at least in part, attributable to loss of control and decreased environmental predictability. A field experiment in which institutionalized aged were randomly assigned to one of four conditions was carried out to assess the effects of increased control and predictability upon the physical and psychological well-being of the aged.

Individuals in three of the four conditions were visited by college undergraduates under varying contingencies, whereas persons in the fourth condition were not visited and served as a baseline comparison group. Subjects in the control condition could determine both the frequency and duration of visits they received. To assess the effects of predictability, a second group of subjects (predict) was informed when they would be visited and how long the visitor would stay, but they have not control over these details. A third group (random) was visited on a random schedule. Holding amount of visitation and the quality of interaction constant across the three groups, strong support was found for the hypothesis that predictable positive events have a powerful positive impact upon the well-being of the institutionalized aged. In addition to
demonstrating the importance of control and predictability as mediators of health-related outcomes among the aged, this experiment also served to demonstrate that well-controlled and ethical experiments can be carried out in applied settings.

Chronological age per se is not sufficient to provide a person with the self-definition of "old", although obviously there is some relationship between chronological age and self-perception. Rather, a series of events or experiences forces acceptance, although reluctantly, of the fact that one is old, and often these events have avoidance and/or the loss of control at their core. Once this occurs, it may be that older people then evaluate themselves on the basis of feelings and behaviours that they attribute to ageing rather than to the environment and circumstances.

Negative attributional processes deriving from reduced feelings of control can create at least two different types of problems for older people that may lower their number of coping attempts and thus detrimentally affect their health. In a study by Langer and Rodin (1976), an intervention designed to encourage elderly nursing home residents to feel more control and responsibility for day-to-day events was used. One group of residents was exposed to a talk delivered by the hospital administrator emphasizing their responsibility for themselves. A second group heard a communication that stressed the staff's responsibility for them as patients. These communications were bolstered by offering to subjects in the experimental group certain responsibilities. They were given plants that were watered by the staff.
The results of this study indicated that residents in the responsibility induced group became more active and reported feeling happier than did the comparison group of residents who were encouraged to feel that the staff would take care of them and try to make them happy. Patients in the responsibility induced group also showed significant improvement in alertness and increased participation in nursing home activities. Although the results of the Langer and Rodin (1976) experiment must remain somewhat clouded because the experimenters failed to run a critical no treatment control group, their data do point to control, in this case operationalized in terms of responsibility, as a determinant of important outcomes for the institutionalized aged.

Taken together, the studies by Schulz (1976) and Langer and Rodin (1976) demonstrate that: (a) increasing environmental control has a positive impact on the physical and psychological status of the institutionalized aged; (b) this effect is obtainable with very different operationalizations of the conceptual variable control; and (c) introducing predictable positive events into the lives of the aged also has a positive impact on their health and psychological status.

Although these findings provide some important answers to questions regarding the psychology of growing old, they raise several other questions as well. First, the subject populations used by both Schulz (1976) and Langer and Rodin (1976) were of relatively high socioeconomic status. We need to ask, therefore, to what extent the obtained data on the
importance of predictability and, control apply only to high socioeconomic status populations residing in the better institutional facilities available to the aged? Second, how do the interventions used in these experiments interact with the individual differences of subjects who participate in them? Ideally, it should be possible to eventually identify those subjects who need and would benefit most from control-enhancing interventions. And third, given the expensive short-term impact of these interventions, what are the long-term effects of participating in such research? Some answer to these questions have been obtained from research carried out recently.

A recently completed experiment (Krantz & Schulz, 1980) was carried out to the generality of the predictability effect by using a low socio-economic status population and to test one aspect of the relocation model proposed by Schulz and Brenner (1977). It was hypothesized that enhancing the predictability of an institutional environment for new admissions to a long-term care facility for the aged would facilitate adaptation and decrease some of the physical and psychological deficits typically associated with relocation.

Psychologically alert old persons recently admitted to a long-term care facility were randomly assigned to one of three treatment conditions. One-third of the subjects were exposed to a treatment designed to enhance the predictability of the new environment. Subjects in this condition received an individualized orientation programme that included detailed information about schedules and routines within the hospital, facilities,
and services available to them, their location within the institution, and
directions on how to get to different areas of the hospital. Clearly, such
information should make the environment more predictable for these
persons.

In order to control for the effects of increased attention given
the Relevant Information group, individuals assigned to a second group
(Irrelevant Information) were given the same amount of personal attention
but did not receive information designed to make their environments
more predictable. These patients were told about the facilities within
the hospital that were irrelevant to their functioning, such as the bakery
and laundry. A third group (No treatment) received treatment as usual,
which included a short orientation to the hospital provided by the social
services staff.

Data assessing patients' level of activity and their physical and
psychological status were collected from patients before and after the
interventions were completed and from the nursing staff after the inter­
ventions were completed. In addition, past history and trait information
were collected from each subject to determine how the interventions
might interact with individual differences. It was expected that the
Relevant Information group would be superior on indicators of health
and psychological status to the Irrelevant Information and No Treatment
groups. It was further hypothesized that simply paying attention to the
recently institutionalized aged may be beneficial; thus, it was expected
also that the Irrelevant Information group would fare better than the
No Treatment group. Subjects in the Relevant Information group were more likely to say their emotional health had improved since their arrival than were persons in the No Treatment group. Subjects in the Relevant Information group were more likely to say that their physical health had improved in the last two weeks than were the No Treatment group subjects.

One goal of the Krantz and Schulz (1980) study was to determine how specific personality variables mediate institutional adaptation in general and to understand how these variables interact with the interventions used. In that study, measures of three personality variables—depression, self-esteem, and feelings of control—were collected as part of the initial interview. Subjects were classified as high, medium, or low on each variable depending on whether they agreed or disagreed with items from the MAGI personality Inventory (Schoenfield, 1972).

Regardless of which condition a subject was assigned to, persons with high self-esteem or those who felt they had control over their lives were more likely to participate in activities and were rated as healthier by the nurses. Level of depression at the initial interview was not related to any of the outcome measures when the data for all three experimental conditions were combined. However, level of depression did interact with treatment conditions. Subjects in the Irrelevant and Relevant Information groups who were initially not depressed or only minimally depressed participated in more activities than did those who were depressed or those who were not depressed but in the No Treatment condition. In
addition, persons in the Relevant Information condition who were initially not depressed were more likely to feel better emotionally at the end of the study that were persons who were either initially depressed or not depressed but in the No Treatment or Irrelevant Information conditions.

Individual differences were also examined as possible predictors of health status and zest for life at the completion of Schulz (1976) study. Analysis of these data revealed that persons who were more aggressive, less introverted, felt good both physically and psychologically, and persons who experienced an increase in environmental control or predictability were highest on indicators of health status and zest for life.

The final question raised concerns the long-term effects of participating in these experiments. Even though subjects exposed to predictability or control-enhancing interventions exhibited large positive effects at the completion of these studies, it is important to know whether or not these gains persisted over time. For example, it may be that these gains are dependent on the presence of the experimenter and quickly dissipate after a study is terminated. Alternatively, these interventions may permanently alter subjects' ability to cope with institutional environments and hence facilitate functioning on a long-term basis. Rodin and Langer (1977) collected health psychological status data 18 months after their study was completed and found that subjects in the responsibility-induced condition showed higher health and activity patterns, and mood and sociability did not decline as greatly when compared to the staff-support comparison group. They concluded that decline in the age can be slowed
or, with a stronger intervention, perhaps even reversed by manipulations which provide an increased sense of effectance in the institutionalized elderly.

A second follow-up study was recently completed on subjects who participated in the Schulz (1976) experiment. Data were collected at 24, 30, and 42 months after the experiment was terminated. The activities director of the retirement home, who was personally familiar with all the participants in the study but blind to the conditions subjects were in, provided a variety of ratings for each subject.

In general, the results of this study indicated that the effects of the particular interventions used were temporary. Persons who had previously improved in psychological and health status when an important positive events was made either predictable or controllable for them exhibited significant declines after the study was terminated.

**Intellectual Achievement**

Failure has dramatic effect on performance. For some children, these effects are positive ones: Effort is escalated, concentration is intensified, persistence is increased, strategy use becomes more sophisticated, and performance is enhanced. For other children, the effects are quite the reverse. Efforts are curtailed, strategies deteriorate, and performance is often severely disrupted. Indeed, these children often become incapable of solving the same problems, they solved easily only shortly before. Although the behaviour of these two groups of children differs
markedly following failure, it looks remarkably similar before failure occurs. In all research on failure effects in achievement situations, it is found that the two groups start out with virtually identical performance—that is, equivalent speed, accuracy, and sophistication of problem-solving strategies. They are also indistinguishable on standardized measures of intelligence. What distinguishes them are their cognitions about their successes and failures.

Responses to failure are associated with very different constellations of achievement cognitions—those characteristic of learned helplessness versus those characteristic of mastery-orientation (Dweck, 1986). In achievement situations, then, helpless children would be characterized by cognitions that imply the inevitability or insurmountability of failure, whereas mastery-oriented children would be characterized by cognitions that imply that their successes are replicable and their mistakes rectifiable.

Previous research has shown marked differences among children in the way they respond to difficulties in intellectual achievement situations. Some children respond in a "mastery-oriented" fashion. Effort and concentration are intensified, and task performance may be enhanced as a result. Indeed, sometimes these children show more mature problem-solving strategies than they had shown before encountering obstacles. Other children, however, respond in a "helpless" fashion. When difficulties occur, they show decreases in their effort and concentration, which are often accompanied by a deterioration of problem-solving strategies and task performance (Diener & Dweck, 1978; Dweck, 1975; Dweck & Bush, 1976; Dweck & Reppucci, 1973).
It has been shown that children's causal attributions for failure are reliable predictors of their response to obstacles in achievement situations; and that altering children's attributions results in alteration of their response to failure. (Andrews & Debus, 1978; Chapin & Dyck, 1976; Diener & Dweck, 1978, 1980; Dweck, 1975; Dweck & Bush, 1976; Dweck & Reppucci, 1973; Fowler & Peterson, 1981; Schunk, 1982; Weiner, 1972, 1974). Children who attribute their failures to invariant or uncontrollable factors, such as insufficient ability, tend to be debilitated by failure. In contrast, children who attribute their failures to variable or controllable factors, particularly insufficient effort, tend to perform at their best when confronting difficulty. When one considers the implications of the different attributions, it becomes clear why they might have these effects. To conclude that one does not have the ability to do well implies that an escalation of effort would be fruitless. In contrast, the belief that one's failures are related to controllable factors such as effort, one's specific strategies, and the like, allow a child to maintain a high assessment of his or her ability, even in the face of obstacles. It also implies than an escalation of effort or an alteration of strategy in the face of failure is likely to pay off.

Helpless children are not only more likely to attribute their failures to uncontrollable factors than are mastery-oriented children when asked, but they are also more likely to make attributions spontaneously. That is, when helpless children confront difficulty, they are likely to focus their attention on the fact that they are failing as well as on their
perceived inability to overcome the failure. In contrast, when mastery-oriented children confront obstacles, they tend to contemplate the causes of their difficulties nor, for that matter, to dwell on the fact that they are experiencing difficulty at all. Instead, they are likely to focus their attention on strategies for solving the problem (Diener & Dweck, 1978).

These patterns of responses to failure have important implications for children's performance in academic settings. For example, one would predict that when the acquisition of new academic material requires one to deal with difficult problems or confusing concepts, helpless children will perform more poorly than they are capable of performing, whereas the mastery-oriented may actually perform their best. In other words, one would predict debilitation versus possible facilitation depending on how the child's achievement orientations interact with the acquisition demands of the academic material (Dweck & Leggett, 1988).

Further, since academic subject areas vary in their acquisition demands, this "interactional" analysis provides one reason that a child might show impairment or fall behind in certain areas at certain times. That is, one would expect helpless children to show decrements in learning and performance (compared to mastery-oriented children of equal ability) when a subject area undergoes a major shift requiring the mastery of new concepts and skills (i.e., requiring a great deal of persistence in the face of difficulty). Such shifts occur in all subject areas but are more frequent in some.
For example, mathematics (particularly what is taught in late elementary school and beyond) appears to be an area in which new units repeatedly confront one with new concepts and new operations. In contrast, most verbal areas (in the later school years) appear to have fewer abrupt transitions for once the basic verbal skills (i.e., reading, spelling, vocabulary) are acquired, subsequent increments in difficulty tend to be gradual. Learning to read a new word or to spell or defining it involves the same basic skills that were used to master old words. Thus, a careful application of previously acquired skills should, in most cases, be sufficient to avoid serious confusion or failure. With math, however, new units may involve such totally new concepts that the relevance of past learning in math may not be evident. Large, sudden, qualitative changes occur, for example, when one goes from arithmetic to algebra to geometry to calculus, and so on. As a result, there is an opportunity for considerable confusion whenever a new unit in math is begun.

Thus, while helpless children would be expected to perform up to their abilities in verbal areas, their achievement orientations may be less well matched to the acquisition demands of mathematics.

When one considers this analysis along with the finding that girls are more likely than boys to be helpless and boys are more likely to be mastery-oriented (Butterfield, 1965; Crandall & Rabson, 1960; Dweck & Bush, 1976; Dweck & Gilliard, 1975; Dweck & Reppucci, 1973; Nicholls, 1975; Veroff, 1969), one potential explanation emerges for why males often perform better than females in mathematical problem-solving
(Fennema & Sherman, 1977; Flanagan, Davis, Daily, Shaycoft, Orr, Goldberg, & Neyman, 1964; Fox 1976; Hilton & Berglund, 1974; Donlon, Ekstrom, & Lockheed, 1976; Ekstrom, Donlon, & Lockheed, 1976; Fox, 1976; Mullis, 1975; Wilson, 1972) whereas girls outscore boys on tests of verbal achievement (Anastasi, 1958; Maccoby & Jacklin, 1974; Donlon et al., 1976).

Summary

Recent studies of learned helplessness have suggested a broad generality of helplessness syndrome (Sahoo & Mohapatra, 1986). It has been shown that organisms develop helplessness following a prolonged exposure to uncontrollable events. Experimental animals exposed to inescapable situations learn that responses and outcomes are independent. Human beings exposed to uncontrollable situations learn that responses and outcomes are unrelated. Learning acquired in this situation impairs future learning. The syndrome is also associated with motivational and emotional deficits.

The theory of helplessness was long recognised for its generality across species (Maier & Seligman, 1976). In recent years, its transcultural use has shown greater promise for research and application. Specifically, the construct of control as a core construct in the theory of learned helplessness has received much attention (Langer, 1983). Originally, the theory described helplessness as a reaction to situations of uncontrollability. Researchers, however encountered an important problem with respect to individual difference factor. It was observed that all individuals
exposed to same amount of uncontrollability did not show equal degrees of deficiency. Later, an explanation in terms of attributional style was proposed to account for individual difference. It was proposed that individuals employed specific attributional style when they encounter uncontrollable (bad) situations. The attribution vary along the dimensions of internality, stability, and globality. People employing internal, stable, and global attribution indicate a greater degree of helplessness than do individuals using external, temporary, and specific attribution.

In the reformulated version, each of these attributional factors is postulated to have definite effects. An internal explanation affects self-esteem loss following uncontrollability. If individuals explain uncontrollability in terms of their own ability, they are likely to experience self-esteem loss. In case of a stable explanation, depressive reactions tend to be chronic. If the bad event is explained by a transient factor, then depressive symptoms would be short-lived. Finally, a global explanation would lead to cross-situational generality. An individual employing global explanation is likely to experience helplessness in a wider variety of situations. On the contrary, a specific explanation would circumscribe the deficit to a single domain of activity.

Thus, in the reformulated learned helplessness theory, explanation and explanatory styles are allowed the status of risk factors. While both the original and reformulated theory stress expectation of no control as a sufficient condition for the helplessness syndrome, the reformulated
theory ascribes causal explanation as a risk factor for symptoms of helplessness and depression. In such a scheme, the situational (reality factors) and dispositional (explanatory style) factors are ascribed specific roles.

The reformulation of helplessness theory in attributional term suggests association between helplessness and depression. Studies carried on clinically depressed patients strengthen the reliability of such association. Depressed patients were found to have explanatory style characterised by internal, stable, and global explanation for bad events. The finding also indicated that this style was not a general characteristic of pathological disturbance, since schizophrenic patients did not show this. Seligman (1981) further observed that changing explanatory style is a good predictor of changing depression. This implied that a therapeutic technique that encourages an individual to change his/her explanatory style is effective in relieving depression. Similar results were also obtained from studies employing samples of children.

Apart from the applied nature of alleviating depression in the framework of helplessness model, a number of other application domains have been identified. Langer (1983) has reviewed a large number of empirical studies to demonstrate the relationship between perceived control and ageing problems. Manipulative studies that lowered the perception of controllability in institutionalized aged individuals showed striking decline in their psychological well being. Similarly, the association between
helplessness and disease-susceptibility has been documented. A few studies have shown the relationship between helplessness and hospitalization (Sahoo & Panda, 1989). Although the link between helplessness and coping has been investigated, the results are found to be complex. In such studies, the stress level is found to moderate the relationship between helplessness and coping with undesirable life events.

A central issue concerns the ontogenesis of helplessness in children. While Dweck and Licht (1980) have indicated the possibility of children's experiential component in school situations as a possible mediating mechanism, a number of plausible factors remain uninvestigated. Dweck and Leggett (1988), on the basis of their review of children's orientation in achievement situation, have attempted to identify cognitions underlying mastery oriented vis-a-vis maladaptive (helpless) orientations. They have proposed a model to indicate the role of children's cognition relating to ability, effort, luck, and chance. On the basis of this model, they have suggested reattribution training programmes to alleviate children's helplessness (Dweck, 1986; Dweck & Leggett, 1988).

It is important, however, to recognize that this analysis presents only a limited aspect of children's environment. Apart from task performance in school settings, there are a number of influences that shape child's cognition. An efficient programme of combating children's helplessness need to involve not only retraining attributions that facilitate mastery orientation, but also steps to weaken the transmission of attribution that facilitate helplessness.
An Analysis and Integration

The reformulated model of helplessness deals with only three basic attributional analysis: internality, stability, and globality. But are these dimensions 'basic'? Of course, the vast amount of research already undertaken shows these to be important dimension, but these dimensions are rarely orthogonal (Krantz & Rude, 1984). In most of the samples and assessments techniques, they are found to be intercorrelated within good events. Attempts should be made to tease apart these so called basic dimensions so that it can be possible to find out if there are still other ways of explaining and still more basic dimensions of attribution.

Furthermore, the model does not answer adequately the question of antecedent factors that lie at the origin of the phenomenon. Broadly, antecedent factors must take into account proximal factors as well as distal factors. In some forms, laboratory studies have investigated certain proximal factors. In fact, most of the research investigations are carried out in laboratory settings in which proximal and situational variables are manipulated where in the internal validity is sought and is attained. This has limited the study of helplessness within the boundary of the laboratory setting and hence the studies so far undertaken have little impact outside, thereby lowering external validity.

Limiting helplessness effect only to laboratory setting also puts a serious obstacle on its generality. To solve these problems, more of naturalistic studies and field investigations, representatives of the real life situations, are to be carried on a wide scale. Quasi-experimental
studies across different groups and cultures can throw light on the antecedent factors that give rise to helplessness syndrome. These would be useful in two important ways. First, such attempts would delineate the construct of helplessness from other similar constructs like depression, cynicism, alienation, and so on. Second, it can also identify other lower order constructs of helplessness. Although available research has identified a few proximal antecedent factors of helplessness, yet the domain of these antecedent variables have not been manipulated to the fullest extent. It seems there are other contextual variables that need theoretical and empirical scrutiny.

Other important antecedent contextual variables include family, neighbourhood, school and text books. It is a common observation that social agents in family and school practise and prefer quite opposite things that give rise to helplessness. For example, children find that corrupt man in the neighbourhood is better off, though they are taught by parents, teachers, and text books to practise honesty. The poor children are put to serious conflicting situations and as they find no way out, remain helpless. At times they may also become depressive.

However, the selection of pertinent variables is appropriated in the context of socio-cultural system in which helplessness occurs. From this standpoint, the study of child rearing practices is an interesting problem to examine. More specifically, an efficient management of child training would require knowledge about socialization emphasis that induces helplessness in children. The objectives of such analysis would be to
identify differential pattern of expectancies, attitudes, rearing practices, and self-perception of mothers. This would help to examine the association between various indicators of socialization and development of competence of children. The analysis would also indicate the relationship with various facets of socialization.

Developmental Considerations

Although a number of studies have been carried out in the laboratory setting, all these studies have manipulated helplessness by inducing an expectation of no control. This has been achieved either by exposing individuals to inescapable loud noise or insoluble cognitive problems. The phenomena is no longer limited in laboratory settings. It is pertinent to recognize that a wide range of relations with distant and immediate environment may have a bearing on the development of helplessness. While the pressures from peer group and neighbourhood are recognized, the role of parents as a potent source of influence appears to be central. Although the role of different socio-cultural antecedent appears to be important, the present work primarily focuses on the role of mothers in the development of helplessness in children.

Several sets of evidence have been offered to support the hypothesis that cognitive and social development are intimately interrelated and that the mother-infant interaction influences both. A mother's prompt responsivenes to her baby's signals tends to foster the development of varied and clear modes of communication and thus the development of
one facet of social competence. One such study by Bell and Ainsworth (1974) has presented findings pertinent to the argument that the responsiveness of a mother figure to infant signals promotes the development of social competence. These findings emerged from a short-term longitudinal study of the development of infant-mother attachment in the first year of life. The subjects were 26 infant-mother pairs from white, middle-class, Baltimore (U.S.A.) families. They were observed in their own homes at intervals of three weeks, each visit lasting approximately four hours.

The signalling behaviour that concerned the investigators in the above mentioned analysis was crying. Each instance of crying that occurred in the course of a home visit was coded. Among the particulars coded were: the duration of the cry, whether the mother responded to it or ignored it, and, if she responded to it, how long she delayed before responding. They were interested in ascertaining whether a mother's responsiveness was associated with a change in the incidence and duration of infant crying in the course of the first year. They were also interested in teasing out the direction of effects—a difficult matter in a naturalistic study which must use correlational procedures.

The first step in the analysis was to examine the stability of infant crying throughout the first year and to compare it with the stability of maternal responsiveness to crying over the same period. Their findings suggested that there is no stability in infant crying until the very end
of the first year, and therefore no support for the view that babies who cry more than others at the end of the first year do so because they are constitutionally irritable. The second step was to consider the intercorrelations between infant crying and maternal responsiveness. The findings show the correlation between the number of crying episodes ignored by the mother and the frequency of infant crying episodes.

Even though crying may be age appropriate at the beginning of the first year, substantially diminished crying is appropriate towards the end of the first year and later. It is evident that maternal unresponsiveness to crying does not diminish it. On the contrary, it tends to prolong this primitive form of signalling up to at least the end of the first year. If, however, an infant's competence is viewed as depending on his mother's cooperativeness one might argue that a one-year-old still must be able to signal effectively if he is to be deemed competent.

Although conducted in a allied setting, this particular study gives credence to the importance of contingency established early in life. The study implies that the responsiveness of mother helps to establish a contingency between infants crying and mother's behaviour. The learning of this relationship gradually generalizes to other person's behaviour and events. As a result, this helps to foster a contingency between child's behaviour and outcomes not only in the physical world but also in interpersonal domain. The child develops a sense of mastering the physical world as well as strengthening inter-personal trust.
Apart from the above study, there are other studies that provide conceptual leads in forming specific hypotheses relating to parental interaction. The developmental studies in the area of achievement motivation have clearly indicated the role of parents' training for independence (Winterbottom, 1958). Similarly, developmental studies in the field of psychological differentiation have implicated socialization parameters (Witkin & Berry, 1975). These studies have shown that mother's mastery training help to foster autonomous strivings in their children. A critical review of the literature in these related fields stresses the role of socialization emphases.

The current version of helplessness model has identified attributional dimensions. However, developmental contexts, in which attributional style is transmitted to children through their parents, have not been explored. It is plausible that parents mediate their own attributional style to their children. The developmental consideration relating to children's helplessness may indicate mediating mechanisms of such transmission.

In sum, the developmental issues concerning children's helplessness appear to be fundamental. Since all these issues are beyond the scope of a single study, the present investigation is primarily focussed on the role of mothers in inducing children's helplessness.

**Hypotheses**

The objectives of the study is to examine the role of mother's socialization processes in the development of helplessness in children.
Considering the possibility that different socialization agents induce helplessness, the present project focusses on mother as primary socializing agent. The following hypotheses are formulated:

1. Mothers of mastery oriented children have higher expectancies relating to their children's behaviour compared to mothers of helpless children.

2. Mothers of mastery oriented children indicate attitudes favouring greater autonomy for their children than do mothers of helpless children.


4. Mothers of mastery oriented children offer responsibility training more often than do mothers of helpless children.

5. Mothers of less helpless children have more positive perception of themselves compared to mothers of more helpless children.

The examination of these hypotheses has employed specific method. A detailed description of the method is given in the next section.