SITUATIONAL AND PERSONAL DETERMINANTS OF COPING WITH STRESSFUL SITUATIONS

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Situational and Personal Determinants of Coping with Stressful Situations

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ABSTRACT

Coping has been thought to be determined by the joint effects of stressful situations' characteristics and the personality of the person who is coping. This study attempted to show how ten forms of coping follow from features of situations and from personality characteristics, and to show the relationship between situation and personality effects on coping. Two hundred and sixty undergraduates filled out Locus of Control, Flexibility, and Sociability scales, selected three stressful situations experienced by them recently, rated these on a series of scales, and reported how they coped. The consistency with which they used various forms of coping varied with the type of coping. Sociability and Locus of Control were weakly related to three forms of coping. Flexibility moderated the effect of situations on coping: the coping of highly flexible people was more responsive to situation characteristics than that of less flexible people. Six canonical correlations described the relationship between situation characteristics and coping. Stressful change elicited adaptation and efforts at control. Disastrous events elicited primarily wishful thinking. Undesirable situations for which the person was responsible elicited self-blame. People responded to failure situations with self-blame, to challenge with wishful thinking, adaptation, and control, and to lack or loss with expression of emotion. There was an inverse relationship between the degree to which people were consistent in the use of a form of coping and the extent its use could be predicted from situation characteristics. Separate factor analyses of continuous situation variables and situation categories showed that stressful situations have a complex rather than simple structure. It was concluded that both personality and situation factors are important in the determination of coping, and they have both individual and interacting effects on coping. There appears to be a trade-off between the

contingency and consistency of use of different forms of coping. Lastly, people respond in complex ways to stressful situations, and tend not to have a single simple "style" of response.

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CHAPTER I

INTRODUCTION

The study of coping and stress is rooted in the existential fact that life involves suffering and attempts to overcome suffering. This in itself is enough to make it interesting and relevant. There are also historical psychological reasons for current interest in the area, some of which will be explored later in the paper. First, I would like to examine the ideas of coping and stress in their professional and casual use. This will be followed by a review of available literature regarding the effects of personality on coping and of situation variables on coping, and by a critical discussion of situation analysis. An empirical study, which addresses some of the problems identified in the review, will then be reported.

Defining Coping

The concept "coping" is widely used, though somewhat vague. Most definitions share a core idea that coping involves acts which relieve distress, remove problems, or aid adaptation to change. Differences among definitions can be understood in terms of differing emphases on the five crucial concepts of a) time of effect, b) area of outcome, c) goodness of outcome, d) intentionality and e) effort. Once these concepts are explored a little, they will be used to describe and then criticize two classes of definitions of coping.

Some of the many effects of coping acts are seen immediately, while others are manifest much later. The apparent efficacy of an act is dependent, therefore, on the time at which is evaluated. An act which seems beneficial in

the short term may be harmful later, and vice versa. A definition which uses good outcome as a criterion of coping would have to account for this.

Acts have effects in different areas as well as at different times. Effects may be purely personal, social, or environmental. Personal effects include changes in emotion, attitude, and understanding, decision formation, and planning. Broadly, personal effects involve thought and feeling. Other effects extend into the persons' social and physical world. A social effect is a change in relationship between the person and others or a change in a social environment. Resolution of a conflict, change in social activities, or change in the emotional climate of a work environment are examples of social effects. Lastly, environmental effects involve changes to the physical world. Pragmatic concerns such as automobile repair, physical fitness, and assuring sufficient and regular income would be involved in this area of effect. A coping act might affect any or all of these areas at some time.

Whatever their area or time frame, outcomes can be evaluated in terms of their desirability. An act can have beneficial or harmful results. It may also in theory have no effect in particular, since the eventual outcome of a situation may not be contingent on the actions of the person involved. In this case the goodness of the outcome is logically distinct from the efficacy of the act. Where the outcome is mostly contingent on actions, efficacy and outcome will be intimately connected.

Whether or not acts' outcomes are in fact desirable, they may be *intended* to be desirable. Intentionality varies in that some acts are clearly intended to improve matters, while others are carried out without any explicit intention about outcome. Intended outcomes can be thought of in terms of timing and area as

before. For example, regardless of its actual effects, an act may be intended to make one feel better in the short term. Outcomes are probably intended to be good, so the issue of goodness is probably not as relevant.

The final parameter of coping is the effort required. Acts require varying amounts of emotional and physical effort. This effort may imply intention, as when someone tries very hard to improve matters. Effort and intention could also be independent. A person may struggle blindly without the explicit intent to improve things, may act routinely to clear up a problem, or may take a passive role believing this to be a successful strategy.

The issues of outcome, intent, and effort can be used to distinguish the two sorts of acts which are usually considered to be "coping".

In the first sort of definition, we tend to call 'coping' those acts which cause or are likely to cause long-term and beneficial outcomes in the social or physical environment. Effort may or may not be involved. Exemplars of this sort of coping are looking for work after being laid off, working out a marriage difficulty, or any sort of problem-solving. Emotionally based acts (e.g., taking your mind off your unemployment) are not usually thought of as coping unless they improve later performance. Relaxing for a day so that you can search for work with renewed vigour would be considered coping because it seems likely to enhance the chances of overt success. Because the outcomes of all acts are not known, acts with probable good overt outcomes are most often included in this definition.

In the other sort of definition, acts are called 'coping' if they are merely *intended* to improve things, especially in social or environmental spheres. If *you* think that a problem can be resolved by throwing tantrums, then you are

engaged in coping when you do this no matter how others evaluate your actions. If the act has the appropriate effect in the long term, we call it 'successful coping'; if not it is 'unsuccessful'. Effort is probably involved. A dictionary definition, 'to contend or strive, especially successfully', reflects this usage (Avis, 1980).

Defensive behaviour, though often contrasted with coping, can be considered in the same conceptual framework. In this system, defenses would usually be considered involuntary, routine, and emotionally focussed acts geared to the short-term which produce a bad outcomes in all spheres in the long term. (although recent work by Lazarus on the benefits of denial is an exception) (see Lazarus & Folkman, 1984). Such acts have been labelled 'immature' and contrasted with mature 'coping' acts by some (see, for example, Andrews, Tennant, Hewson, & Vaillant, 1978, or Haan, 1965). This idea is opposite the pragmatic, management, conception of coping discussed earlier.

Problems with the definitions.

Implicit in pragmatic conceptions of coping is the idea that a problem exists in the social or physical environment and that successful resolution involves removal of the problem. This raises a difficulty in that some problems really are intractable to solution by individuals. In such instances, the sort of active, problem-focussed coping held as a model would likely be ineffective and exhausting. For example, problem solving is probably not very helpful with intra-psychic problems such as grief. The loss is final. "Person-environment fit" (see, e.g., Caplan, Naidu & Tripathi, 1984) is a recent version of the idea that problems exist in the environment. The "person" part of this model says only

that a situation needs a subject to be a problem. The model does not acknowledge that distress (such as grief) could be a problem itself. To account for the emotional end of problems, the concept of coping should be broad enough to include acts geared to emotional tasks as well.

The pragmatic conception of "coping " also falls short because the success of acts can only be known after the fact. Its classification therefore could change depending on its consequences, which may depend partly on factors unrelated to the act. Another problem with this conception is that an act can have many consequences at once and more which unfold over time. Some may be good, others bad, others ambiguous. The act's efficacy will depend on when and how you look at it.

The problem of identifying coping with intent (the other usual approach) is that it has not been demonstrated that people undertake an action with the explicit idea that it will be a "coping" action. People often simply act without exact knowledge of their motives and without explicit intent. A beautiful example of this principle in literature is Dostoyevsky's Ivan Karamazov, whose motives in leaving the scene of his father's future murder are clear to him only well after the event. For a more mundane example, you may cry on a friend's shoulder without having planned to do so. When you do, you may not be intending to 'cope' per se -- it may just seem to be the only thing, or the most compelling thing, to do, at the time. The idea of intent is probably most relevant for coping with problems in the social or physical environment, especially where a plan is needed improve things. It seems least useful with the less concrete and more spontaneous emotional coping.

The variety and ambiguity of coping definitions is reflected in coping inventories which list many behaviours which might or might not be considered coping depending on the context and interpretation. All sorts of reactions are listed, only some of which are beneficial efforts geared to the long-term, overt situation. One of the most extensive item lists (McCrae, 1983) includes items ranging from 'hoped for a miracle' and 'went along with fate' to 'took direct action' and 'stood your ground'; from 'had temper tantrum' to 'had no emotional reaction'. Some of these items do not fall into either of the two popular coping conceptions outlined previously. For example, 'had temper tantrum' lacks connotations of intent or effort to improve matters, and provides the complication that the behaviour will not usually help in either the short or long term. The items represent legitimate class of reactions to difficulties, but it is not clear that they are 'coping', as the word is usually used, although they might be considered "immature" or "defensive" acts.

Another problem of some items in coping inventories is that it is not clear which sort of coping would be entailed by the action. For instance, the bare behavioural description "went for a walk in the park" does not give the information needed to know which (if any) sort of coping is involved. It might or might not be *intended* to accomplish aims such as restoring calm, giving a chance to think about a problem, or escaping from the scene of trouble. If there was intent, then "went for a walk" is attempted coping. If there was no intent, but the walk provided a chance to cool down and think about the issue, there is inadvertent coping. If there was neither intent nor success, then in this one instance the item would not belong in a coping inventory. The existence of a problem is not enough to identify subsequent acts as "coping", since to be thought of as "coping", an act has to have one of a set of other properties,

such as being intended to help or actually helping. Studies of coping which use mere behavioural descriptions of acts will inevitably produce somewhat ambiguous results, since one will know what people did, but not whether or how they coped.

While there is as yet no common, clear, and problem-free concept of "coping", given the utility of its various uses, the term should be retained. It might make sense, though, to consider coping to be one variable property of acts, rather than to consider it to be their defining feature. One could decide to what extent any act conforms to either concept of coping rather than assign it to 'coping' or 'non-coping' categories. At the same time, given the limitations of existing definitions (especially regarding the issue of intent), study of coping should probably be broad enough to include a variety of reactions to distressing situations.

Definitions of stress

The concept of "stress" has no more coherence or unanimity of use than that of "coping". The term has at present three main uses which differ in terms of where they locate stress.

In the first usage, "stress" is located outside the body. This use borrows from mechanics, where stress is "a force or system of forces that tends to produce deformation in a body" (Avis, 1980). "Force" in psychosocial phenomena is obviously only analagous to mechanical force, and "deformation" must be emotional pain or changes in behaviour rather than physical deformation (although physiological correlates of stress could be thought of as a sort of deformation). People say that they have "been *under* a lot of stress" when they experience

many emotional and behavioural demands. Lazarus has cast this concept in psychological language as follows: "Psychological stress is a particular relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being." (Lazarus & Folkman, 1984, pg. 19). This definition connects stress with the placing of strain on people by the environment.

The second sort of definition looks at the deformation rather than the force and calls this "stress". Selye (1956) defined stress as the 'general adaptation syndrome': a bodily state which is non-specifically induced. Stress in this sense is a bodily reaction to a "stressor". A stressor, in turn, is anything which produces non-specific physiological changes. The general adaptation syndrome is characterized by adrenal secretion, shrinkage of lymphatic organs, gastrointestinal ulcers, among many other reactions. Not only are noxious events stressful, but even such benign acts such as playing tennis or kissing increase the rate of wear and tear on the body and are therefore stressful. A stream of research based on this assumption will be discussed later. For now it is enough to note that in this scheme the environment receives little analysis. It is thought to vary simply in the degree to which it produces the general adaptation syndrome.

The third way of thinking of stress locates stress in consciousness and ties it to emotion. 'Stress' is this sense is very much like 'anxiety', but may involve strong and unpleasant emotions such as rage. It can also include milder but more chronic feelings such as fatigue or frustration. The end-of-exam comment of the student, "I'm feeling a lot of stress", reflects this sort of definition.

The term "stress" may not be very useful in the long run. Older words have a richness which 'stress' lacks. For example, English has a fairly rich

lexicon of emotion labels. The stress-as-emotion meaning seems to add little to "anxiety" or "work-overload" and is less precise. Selye's "stress" may be useful in medicine, but it adds little to psychological discussion. Definitions which locate stress in psychosocial forces, as with those which equate stress and emotion, are too vague. To call a whole, complex, situation "stress" obscures the elements which are upsetting or which provoke response. Lazarus' definition, which emphasizes a strain on personal resources and personal danger, lacks these problems. In this case, though, the older word "strain" seems equally applicable and reflects the same concept.

Relevance of coping research

As noted initially, people are interested in coping for several reasons. Recent research was spawned by an initial interest in the connections between stressful life events, disease and psychological disturbance. Studies in the late 1960s and early 1970s showed that such events often did precede illness (see, for example, Dohrenwend & Dohrenwend, 1974, for a series of such studies). Because not everyone becomes ill following a crisis, factors which mediate the stress-outcome relationship were sought.

Tnree sorts of mediators have been examined. One set includes the personality characteristics of those who are not severely affected by life events. Such traits as hardiness (Kobasa & Puccetti, 1983), Type A personality, social conformity, liberal intellectualism, emotional sensitivity (Garrity & Marx, 1985), easy-goingness (Holohan & Moos, 1985, 1986), self confidence (Holohan & Moos, 1986), locus of control (Husaini & Von Frank, 1985; Lefcourt, 1979; Nelson & Cohen, 1983; Krause, 1985) mastery, trust (Folkman & Lazarus, 1986; Wheaton,

1985), and flexibility (Antonovsky, 1979; Wheaton, 1985), have all been connected with physical or psychological outcome after life events. In some instances, mediating effects were shown; in others, it seemed that life events were responsible for one main effect, while personality characteristics were responsible for another.

A second mediating factor which has received much attention is social support obtained or available during the crisis (see, for example, Andrews, Tennant, Hewson & Vaillant, 1978; Burks & Martin, 1985; Cohen, McGowan, Fooskas, & Rose, 1984; Eaton, 1978; Husaini & Von Frank, 1985; Lin, Simeone, Ensel, & Kuo, 1979; Mitchell, Cronkite, & Moos, 1983; Monroe, 1983a; Moos, 1984; Sarason, Sarason & Johnson, 1985; Schradel & Dougher, 1985; and Thoits, 1982). In theory, people will feel less impact from events if they have support. Whether or not mediating effects of support are seen seems to depend in part on the research methods and measures used and the statistical analysis used. There is as yet no clear consensus in the literature about the effects of social support.

The final mediator is coping. This is related to outcome as well as the other two sets of mediating factors. People have different reactions to problems, and it makes sense that some of these responses remove the problem, remove distress over the problem, cause successful adaptation, or have all three effects (see Wong & Reker, 1984, for a more detailed discussion about what "successful" coping ought to accomplish). The success of the response in producing these outcomes should in turn affect later distress. The relation of coping to outcome has received much empirical attention (see, for example, Andrews et al., 1978; Billing & Moos, 1985; Dowd, Clairborn & Milne, 1985; Folkman & Lazarus, 1986; Folkman, Lazarus, Dunkel-Schetter, DeLongis & Gruen, 1986; Folkman, Lazarus,

Gruen, & DeLongis, 1986; Foster & Gallagher, 1986; Hinkle, 1974; Holohan & Moos, 1985, 1986; Husaini & Von Frank, 1985; Mitchell et al., 1983; Pearlin & Schooler, 1978, Vogel, 1985; and Wheaton, 1983, 1985). In some cases, coping has main effects, in others interactive effects with life events on outcome. Some studies have also shown that people who are depressed cope differently from those who are not (see, e.g., Parker, Brown, & Blignault, 1986, for an analysis of how coping behaviors predict the course of clinical depression).

Because of such results, it would be interesting to know what consitutes "successful" coping, and to know this one needs to explore several other areas. It would be useful, for example, to know the structure of coping: how do different coping acts relate to one another? How many different ways of coping are there? What classes of effects are there? Just how should we conceptualize coping? It would also be useful to know how coping relates to features of the problematic situations. If some coping is appropriate or inappropriate in given situations, there must be some correspondence between situational features and coping responses.

To know how coping relates to situations requires knowledge of the structure of problematic situations, and of how this in turn relates to coping patterns. To this end it would also be useful to know how much people match their coping with the situation, or to what extent their coping efforts are consistent and trait-like. If coping is somewhat trait-like, then it is not solely a function of situations, but depends also on the characteristics of the person in the situation. This too would make sense: that what you do depends partly on who you are and partly on where you are. If this is the case, then effective coping has to meet the needs of the person as well as the requirements of the environment.

From the variety of questions raised here, it should be obvious that coping could be an interesting subject in its own right, and need not be examined merely as a mediator of some other process. Coping can be considered a class of human behaviour like any other class, deserving the same investigation. Here is a behaviour: what is it? what causes it? what are its effects?

This paper's task is to attempt to answer some of these many questions. Some answers come from published sources, and some will come from an empirical study reported later. Hopefully, it will add to the existing body of research and clear up some of the puzzles of coping. The twin thrusts of both the review and empirical sections will be the relationship of coping to personal characteristics and to characteristics of situations.

CHAPTER II

PERSONALITY AND COPING

Research on the relationship between personality traits and coping styles shows that we need to consider the role of both personality and situation characteristics in the determination of coping. Reviews of personality and situation research will be followed by a critical discussion of situation analysis and the ways in which situations have been characterized in stress research and in non-clinically oriented work.

Personality and appraisal

Since it is the product of idiosyncratic cognitive and emotional processes, knowledge, and skills, coping ought to be tied to personal characteristics. Lazarus' work on appraisal as a determinant of emotions and coping shows how this might be. His idea, now widely echoed in the coping literature, is that coping depends on two appraisals. One appraisal evaluates situations as irrelevant, benign-positive, and stressful. Stress appraisals include harm/loss, threat, and challenge, according to Lazarus and Folkman (1984), although other dimensions are probably also important. More will be said of this later, however. The other appraisal concerns availability of coping options, likely outcome of each, and personal capacity to carry each out.

Since personality affects both appraisals, it must also affect coping. For example, attitude may be very important in initial appraisal. One who believes that "the world is a cold and cruel place where the important thing is to destroy competitors before they destroy you" will make more appraisals of

threat in rather benign situations than one who believes that people are basically good and cooperative. He or she will have to cope with more threats than others, therefore. The belief may also shape the eventual coping style used. Cooperative solutions to interpersonal problems would not be acceptable to him or her because trust is impossible. An acceptable solution would be to win at all costs, ensuring that the other person(s) know that they have lost. Thus, the attitude helps to determine the requirements of a "successful" resolution. If such a person were fired from a job, then he or she might have to salvage face (an emotional task) as well as find new employment (an environmenal task). In short, an attitude can shape both the requirements of success and the acceptable means of attaining it.

Beliefs about oneself can be as important as beliefs about the environment. Most obviously, beliefs about one's abilities will shape what one does. For example, belief in one's competence ought to lead to action rather than refraining from action. Beliefs about oneself can also affect initial appraisals of situations. For example, if you believe that you are boring, then lack of attentiveness by others might be understood as "they're bored", rather than, say, "they're tired".

If beliefs are grounded in such personal characteristics as ability or prior experiences, there are even stronger reasons why they should shape coping. If belief in one's ability is matched by a special set of skills, then it would be natural to use these skills where appropriate. Competence can follow from, as well as create, attitude. An attitude may lead to exposure to situations which may then be mastered. For example, those who enjoy company may seek others out and thus gain social skills. Empirical support for part of this idea comes from Garrity and Marx (1985), who found that Type A people report more life changes than other groups.

Values, as well as attitudes and beliefs, may also be important in determination of reactions. The features of situations which match one's values will receive more attention than irrelevant features in the initial appraisal. Later, values will guide the response. For example, a person who is not concerned about material well-being would not be as distressed by a pay cut as someone who values money and fears its loss. If laid-off, the first person would not have to find a new job as urgently as the second.

In conclusion, attitude, belief, values, and skills are all personal characteristics which in theory ought to affect coping directly, or affect it indirectly through appraisal. Little if any research has been done to show if this theory is sound. Available research shows correlations between various personality traits and specific coping acts, but their cause can in most cases only be inferred. The review which follows documents some of the correlations to show the nature and strength of the association of personality and coping as well as to show which questions remain unanswered.

Traits and coping

Researchers have studied self-esteem, mastery, self-denial, and non-disclosure (Fleishman, 1984), locus of control (Folkman et al, 1986; Parkes, 1984; Tanck & Robbins, 1979), easygoingness, self-confidence (Holhan & Moos, 1987), ego strength (Hunter & Goodstein, (1967), introversion/extraversion, neuroticism, psychoticism (Rim, 1986), assertiveness (Tanck & Robbins, 1979), and trait anxiety (Olah, Torestad & Magnusson, 1984) in relation to coping. Some of these traits are related. For example, internal locus of control, mastery and possibly assertiveness all reflect the tendency or ability to take control of

difficult situations. Non-disclosure and extraversion involve degrees of relatedness to people. Self-confidence, self-esteem (which are related in turn with mastery) and trait anxiety concern feelings of competence and self-worth. Most of these studies have showed that personality characteristics do correlate with some coping acts, in varying degrees.

Fleishman (1984), for example, found that mastery, self-esteem, self-denial, non-disclosure, stress, sex, age, education, and income, accounted for between 5% and 24% of the variance of 22 individual coping variables. The effects of personality were not consistent across the role areas of marriage, parenting, finance, and work. However, it seems that self-denial affects emotion-focussed coping such as resignation or selective ignoring. Similarly, non-disclosure affects advice seeking: the more people avoid disclosing their problems to others, the less they seek advice. Mastery is related to problem solving with work-related but not interpersonal problems, and is not related to advice seeking in marriage or parenting. Further, those who are high in mastery use little denial or reinterpretation of problems.

Parkes (1984) examined locus of control rather than mastery. Again, correlations between generalized control beliefs and three types of coping depend in part upon the type of situation. For example, people with more internal locus of control tend to use direct coping and less suppression only with changeable situations. This is not due to any relationship between between locus of control and the perceptions of controllability.

Tanck and Robbins (1979) looked at students' locus of control in relation to coping with academic pressures. Their results are hard to interpret because the locus of control and assertiveness effects obtained varied with sex of respondent

and not with situations. Nine of 22 coping behaviours were significantly correlated with assertiveness (in the entire sample), while 4 of the 22 behaviours were correlated with locus of control. Some of the sex differences may be accounted for by the differences in use of marijuana use and sexual comfort (males reported more) and in becoming irritable, rumination, eating, and ceasing effective functioning (females reported more).

Holohan and Moos (1987) looked at self confidence and easy-goingness and active cognitive, active behavioural, and avoidance coping. Self confidence is negatively related to avoidance and positively related to active behavioural coping (4% variance accounted for) and active cognitive coping (1% variance accounted for). Easy-going disposition is negatively related to avoidance (4% variance in common) but no other coping. As with the other studies, active coping was done with high frequency by all respondants, and it was the avoidant, more emotionally oriented coping which was related most to personality variables.

Ego strength, neuroticism, and trait anxiety also seem to be related to coping. Hunter and Goodstein (1967) found that people with high ego strength used more logical analysis after a staged failure. Those with low ego strength were more defensive and used more rationalization. Denial did not vary with ego strength. Neuroticism is related to problem-focussed coping, wishful thinking, self blame, and tension reduction (Rim, 1986). The relationships between extraversion and coping are smaller and sex specific. Personality variables accounted for between 5% and 16% of the variance in coping styles when significant. Olah et al. (1984) showed that trait anxiety is positively related to escape coping and negatively to constructive coping. Further, Magnusson and Olah (1983) found that individuals with low state anxiety are characterized by a high sense of behavioural control and constructive coping strategies.

A review of personality and coping would not be complete without mention of the work of Sidle, Moos, Adams, and Cady (1969). Although their coping scale was not arranged around theoretical dimensions of coping, they did obtain significant Individual x Strategy effects. Their data suggested that

> (1) persons with high feelings of self-worth may be more likely to cope by talking with others and by drawing on their past experience, while persons of low self-worth are more likely to cope by trying to reduce tension; (2) persons who expect the worst tend to view themselves as passive, slow, and changeable, and (3) people who draw on past experiences in coping see themselves as internally controlled. (pg. 230).

The ANOVA showed that some individuals prefer to use certain strategies over others, regardless of the specific problem at hand.

Though these studies show in general that measured personality traits can account for small amounts of the variance in individual coping categories in single situations, they do not in general account for the effect of the characteristics of situations on coping. As a result, we have no way of knowing whether the interactions between personality and situation are a potent source of variance. Such interactions may be quite important, however. Sarason, Smith, and Diener (1975) showed that situation x person interactions were significant in 60% of a sample of studies, while personality variables alone were significant in just 31% of the sample. Including the interaction component added 4.6% to variance accounted for by situations (10.3%) and personality (8.7%) alone. Others (e.g., Bowers, 1973, cited in Sarason et al., 1975) have found that the interaction can account for more variance (21%) than either situation or personality variables (10% and 13%). Though many of the above studes show that personality effects are situation specific, situations were not analyzed in enough detail to define the relationship. It would be valuable to know how traits' influence on coping would vary across different sorts of situations. It would also be interesting to know

how much stability of effect there is within persons.

A recent study by Folkman et al. (1986) has addressed the stability question. In this study, people described their coping with five different stressful situations. The auto-correlations of the different coping types across situations show that certain sorts of coping are linked to the coper, hence, to some unknown personality variables. Self-controlling, positive reappraisal, and escape-avoidance coping efforts had mean autocorrelations over .40. Distancing and accepting responsibility were the next most stable (coefficients = .32 and .26), while planful problem solving, confrontive coping, and seeking social support were the least consistent. Once again, the coping efforts which were the most closely linked to the personality of the coper were emotionally oriented acts, while acts aimed at the overt problem were the least consistent within persons.

In conclusion, personality traits such as locus of control, mastery, and anxiety account for modest amounts of coping variance. The effects seem to depend on both the forms of coping considered and the characteristics of the situation to be coped with.

CHAPTER III

SITUATIONS AND COPING

Common sense as well as prior research suggests that people change their coping according to the demands of the situation. Although some research shows that this is generally true, there is no consensus about how situations should be described. This hinders discovery of underlying principles or relationships between coping and situations. We lack an adequate system of understanding situations and have not yet fully determined which dimensions of situations are relevant to coping. The rather inchoate body of research presented next shows which characteristics of situations are most relevant to coping and reveals the general magnitude of effects.

Situations have traditionally been described by one of two major approaches. They can be looked at in terms of a set of continua or *dimensions*. For example, situations vary in their controllability, desirability, or seriousness (cf. Stone & Neale, 1984; Pilkonis et al., 1985). They can also be classified by type. For instance, some (e.g., Pearlin & Schooler, 1978; Folkman & Lazarus, 1980) have used role areas such as finance, marriage, parenting, or work as types. Others (e.g., McCrae, 1983, Folkman & Lazarus, 1985, Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986) have focussed on the meaning of the event for the person. McCrae used loss, threat, and challenge categories, while Folkman et al (1986) used the personal stakes of physical well-being, self esteem, goal at work, financial strain, loss of respect for another, and a loved one's well-being.

One of the first attempts to look at situations' influence on coping was also one of the first attempts to develop a coping typology. Sidle et al. (1969) presented students with three different scenarios and a coping checklist and

asked them how they would respond. A three-way analysis of variance (Situations x Coping x Individuals) showed that some scenarios tended to elicit the use of certain coping types regardless of individuals characteristics.

It is hard to generalize from the Sidle et al. study for three reasons. First, the students responded to scenarios which they may never have experienced. They might not, therefore, know how they would respond. Second, what they expect they *would* do in a given situation may be quite different from what they actually do in the turmoil of the experience. Third, the scenarios involved many elements which were inter-related and present simultaneously. For example, one scenario presented loneliness, a sexual problem, difficulty discussing problems with the spouse, and trouble with in-laws, all within the first two months of a marriage. Although this combination makes the scenario believable, it makes it difficult to know which elements affect coping. As a result it is hard to know what to make of the finding beyond noting that there was an effect for situations.

Folkman and Lazarus (1985), in contrast, examined coping in a *real* and ongoing situation and studied its impact at three stages. Students filled out coping scales while preparing for an exam under uncertain conditions, while waiting for the outcome, and after learning the results. The students changed their use of six of the eight ways of coping across the different phases of the exam. One finding was that problem-focussed coping was high initially, dropped, during the waiting stage, and then increased when the marks were revealed.

Folkman and Lazarus also related coping to the experience of threat, challenge, harm, and benefit emotions. Wishful thinking and seeking social support were related to threat emotions, while problem-focussed coping and self-isolation

went with challenge emotions. Knowing which emotions were evoked makes it easier to understand how the situations were perceived by the individual students and hence to understand the relation between coping and situations. Those who felt a challenge may have isolated themselves and studied, while those who felt threatened may have hoped for the best with their friends. This is a nice example of the principle that, even though the overt situational characteristics have an effect, it still matters how people perceive them personally.

Individual differences in perception break up the consensually seen situation into as many facets as there are viewpoints. Where one student has a challenge or opportunity in an exam, another may face an ordeal without hope of benefit. Although this principle has been enunciated by psychologists as early as 1938, with Murray's distinction between alpha and beta press, a surprising number of researchers tacitly assume that the only influences on a person are the ones visible to impersonal observers. Yet people enter new situations with many different perspectives and values, and it would be surprising if situations had the same appraised meaning to all participants. Even Holmes and Rahe (1967), who pioneered a method of assessing stress without relying on individual viewpoints, noted that individuals gave different meanings and interpretations to the life events listed in the Social Readjustment Rating Scale.

The fact that many researchers prefer to ignore individual differences in perceptions of situations may be a misplaced relic of positivism. In the case of such personal events as judgments, there can be no impersonal witness to verify reports of experience. In the interests of good science and empiricism (in the broad sense of gaining knowledge through the data of experience) (Robinson, 1986), we should study what we can in the way most appropriate to the subject matter, rather than reject certain data and thereby fetter our understanding of

human beings simply because we do not believe we *should* study certain phenomena, such as attitude and evaluation, which people, researchers included, experience in and out of the laboratory. We ought to reject such factors only after we have examined them and concluded that they contribute nothing to our understanding of human behaviour and experience.

The case for subjectivism is supported by empirical evidence which suggests that individuals' perception of situations correlates with their subsequent behaviour. McCrae (1984) and Folkman et al (1986), for example, have both looked at the personal significance of stressful situations in even more depth than the Folkman and Lazarus (1985) study. Their results testify to the importance of personal perceptions of situations in coping.

McCrae classified situations into threat, loss, and challenge categories. Threat is defined as anticipated damage. Loss is damage which has already occurred. Challenges are situations which require exceptional efforts but which have a 'generally positive tone', and tend to controllable. McCrae suggests that challenges and threats tend to be chronic stressors, while losses are acute stressors.

Only some of the effects will be described here because McCrae used 28 different coping scales. Situations had the most powerful effects on humour, self adaptation, wishful thinking, escapist fantasy, rational action, seeking help, positive thinking, faith, and perseverance, (in order of effect size). Of the scales which differed in use across situations, faith and expression of feelings were most common with a loss. Fatalism, wishful thinking, and seeking help were most frequent in threat situations. Positive thinking, rational action, and restraint were most typical of challenges.

Situation types accounted for between 8% and 16% of the variance of the above coping variables. Interestingly, of the nine coping variables which were not responsive to situation types, most would be considered defensive or emotionally focussed. Examples of these are denial of affect, distraction, avoidance, withdrawal, substitution, passivity and indecisiveness. Most of these neither improve the situation very much nor make one feel better in the end. It may be that these sorts of responses to trouble are habitual and personal, rather like Shapiro's neurotic styles (1965), and so do not vary across different situations. This idea has not yet been tested empirically to my knowledge.

Folkman et al. (1986) classified situations by the stakes of the situation rather than by threat, loss, or challenge. They report different use of coping in different stake conditions. The stakes were self esteem, loved one's well being, loss of respect for another, goal at work, financial resources, and one's own physical health. One example of their findings is that "when threat to self esteem was high, subjects used more confrontive coping, self-control coping, accepted more responsibility, and used more escape-avoidance compared to when threat to self esteem was low" (pg. 997).

Though there were differences, self-control, escape-avoidance, and seeking social support were done in all high stake conditions. It may be that these highly popular responses are effective in many different situations, and are used indiscriminately, therefore. McCrae's study, which contrasted the frequency of endorsement of different coping options across categories, rather than just within a category as here, tells us more about situation-specific effects.

Folkman et al. (1986) also considered the four appraised dimensions of controllability, need for information, need to accept, and need to hold back from

action. These dimensions and stakes are just a few of those which might be relevant to coping. Others, such as Stone and Neale (1984) have included more extensive assessments of situations.

Stone and Neale (1984), in their development of scales for daily coping and daily experiences, have shown relationships between eight ways of coping and the seven dimensions of situations. These dimensions are control over event's occurrence, desirability, degree of life change stemming from the event, how much it was expected, how meaningful it was, whether it was a single event or a longer lasting, chronic situation, and whether it has happened before. All of these were related to one or more of eight coping variables. Desirability affected five ways of coping; change, meaningfulness, and length affected four, prior experience three, control two, and anticipation just one variable. As in the Folkman et al. (1986) study, several of the coping variables were affected by four or more of the situation variables, showing a lack of specificity again. These variables were catharsis, social support, relaxation, and religion. In general, coping increases with the potency of the situation variables; that is, with decreased control, much change, more meaningfulness, longer duration, prior exposure, and extremes of desirability/undesirability. Direct action, as in other studies, was the most commonly used strategy and was used by about 50% of respondents across all levels of all situation variables.

Stone and Neale suggested that the controllability of the situation should be considered in future studies. Magnusson and Olah (1983) have used this variable together with predictability to predict coping. More predictability and controllability were related to fewer passive and escape and more constructive solutions for both sexes. The more anxiety produced by the situation, also, the fewer constructive and the more escape solutions were produced. Olah, Torestad

and Magnusson (1984) subsequently found that scenarios which were not familiar to the students were associated with less constructive and more escape coping.

Unlike other researchers, who decided on *a priori* coping, situation, and/or personality typologies, Kjerulff and Wiggins (1976) used 'three-mode factor analysis to discover relevant person, situation, and coping dimensions in the data. This technique ideally could show what sorts of coping are done by which types of people in which situations.

Kjerulff and Wiggins had graduate students rate their reactions to a variety of graduate school problems. They obtained three situation dimensions: academic failure, interpersonal problems, and situations which are not clearly anyone's fault. The three reaction dimensions were anger at self vs. anger at others, probability of occurrence, and general anxiety. The first subject dimension represented students who did not desire professional respect, did not plan to do important research, saw themselves less as competent than others, and were making slower progress towards a doctoral degree. The second dimension represented more ambitious and successful students. Subject factors may have been poorly interpreted because there was insufficient information about the students.

The core matrix shows that unsuccessful students blame themselves for academic failure, others for interpersonal problems, and are quite undisturbed by situations where no-one is clearly at fault. The successful students, though, feel anxious in all types of situations. Two very different types of graduate students were found. The method used allows these types to be understood in terms of their coping styles in different situations.

Though the above studies show that coping varies with some characteristics of situations, few of them examined situations in much detail and fewer still

studied the same set of characteristics. This problem may stem from the fact that we lack a psychology of situations. There is no unified body of research showing which dimensions are crucial determinants of behaviours such as coping. Our formal understanding is still in its infancy. The next section has two purposes: one, to review the characteristics which have been examined in the past, and two, to show which of these are likely to be relevant to coping.

CHAPTER IV

SITUATION DIMENSIONS

Though psychologists have recognized the importance of situations ("stimuli") since the early days of behaviourism, they began to study situations in detail only recently. Some valuable work has been done by researchers attempting to determine the characteristics of situations ("life events") which predict disease and psychological distress. This work on distressing situations is relevant to research into coping, since coping can be thought of as people's attempts to survive and overcome such situations. Further, correlations between situations and illness show which aspects of situations are potent, in that they relate to some change in the state of the person who experiences them. It may help us to better understand situations, as well as improve our ability to predict psychological distress.

Research on life events prompted people to ask which aspects of situations were distressing and "stressful". Lazarus' appraisal theory, on another front, makes one wonder which attributes are appraised. Research stemming from these two questions give us much of what we know about situations.

Life events research

Recent research into the essential characteristics of stressful situations started with an influential paper by Holmes and Rahe in 1967. They measured life stress by counting the number of major life events experienced in the prior year. The events (such as marriage or divorce) were weighted by the amount degree of life change each typically involves. Holmes and Rahe considered life change

to be the most important aspect of life events:

> The occurrence of each [life event] usually evoked or was associated with some adaptive or coping behaviour on the part of the involved individual. Thus, each item has been constructed to contain life events whose advent is either indicative of or requires a significant change in the ongoing life pattern of the individual. The emphasis is on change from the existing steady state, and not on psychological meaning, emotion, or social desirability. (pg. 217)

Later research showed that life change did indeed correlate with physical illness and/or psychological disorder (Aakster, 1974; Billings & Moos, 1984; Cohen et al., 1984; Eaton, 1978; Flannery, 1986; Holohan & Moos, 1985, 1986; Husaini & Von Frank, 1985; Kuiper, Olinger & Lyons, 1986; Lefcourt, Miller, Ware & Sheik, 1981; Lin et al., 1979; Mitchell, Cronkite & Moos, 1983; and Nelson & Cohen, 1983).

The Holmes and Rahe study was one attempt to isolate a critical feature of stressful situations. Following Selye (1955), they purposely included events which were "socially desirable and consonant with American values of achievement, success [and] materialism." They emphasized change, of whatever desirability. This study is extensively cited and the scale it reports (the Schedule of Recent Life Events, or SRE) has had wide popularity. It has also ignited much controversy. One set of research questioned the importance of change over desirability; the other challenged the identification of stress with only major events.

The first challenge was the assertion that that the desirability of a situation matters. Life events are not therefore simply non-specific stimuli with the same linear and additive impact on all people (Perkins, 1985) as Selye had said. Apart from our own experience with desirable and undesirable events, empirical study shows that undesirable events predict later illness and psychological disturbance, while desirable events do not. Mueller, Edwards and Yarvis (1977) correlated

desirable and undesirable items from the SRE with psychiatric symptoms, anxiety, and general feelings of well-being. They found that undesirable events had much higher correlations with distress (squared correlations in the order of .20 or .25) than did desirable events (squared correlations .01 or .02). Furthermore, when the effect of undesirable life events was partialled out, there was little relationship between the SRE change score and outcome.

Some (cf. Lazarus, Kanner & Folkman, 1980, cited in Cohen et al., 1984) suggested that desirable events have a buffering effect on undesirable events even if they have no main effect. Positive events, like a vacation, may provide a breathing space and a chance to restore one's esteem and coping resources. Cohen et al. (1984), like Mueller et al. found that only undesirable events were correlated with psychological symptoms. The squared correlations were again in the .20 to .25 range. Another finding, consistent with the buffering hypothesis, was that the interaction between desirable and undesirable events accounted for another 7% of the variance in depression, in a cross-sectional design. As the number of desirable events decreased, the relationship between undesirable events and depression became stronger. This finding is also consistent with Mueller et al.'s (1977) finding that when desirable events were controlled statistically, the correlations between change and outcome were increased slightly.

Unfortunately, prospective data did not contain desirable x undesirable event interactions, and a second set of cross-sectional data contained only weak interaction effects. Taken as a whole, their results show that desirable events have no direct effect on outcome, and that their buffering effects are either negligible or non-existent. The conclusion which follows, then, is that only certain types of change affect symptoms, and that Holmes and Rahe were wrong in adopting Selye's notion that non-specific change is the core of situations

which cause later disorders.

Though research using life events scales showed the importance of the dimension of desirability, it could not assess the importance of change. Recall that all SRE items either require change or indicate change. Chronic problems are not represented in the scale. However, experience and reason suggest that the stressfulness of, say, being short of money or living with a physical handicap does not evaporate as the situation persists. Instead, such situations may be quite stressful, and the stress may actually become worse as the problem persists.

Kanner, Coyne, Schaefer and Lazarus (1981) were the first to measure the frequency of chronic and minor problems ("hassles"). Their measure allowed them to examine the effect of non-change situations. If these situations have the same effects as major life events, then some characteristic other than change must be responsible. Hassles, "the irritating, frustrating, distressing demands that to some extent characterize everyday transactions with the environment" (Kanner et al., pg. 3) were thought to be this characteristic. Life events were thought to change the pattern of daily hassles. Thus, hassles could explain the effects of life events (Eckenrode (1984) has since supported this hypothesis) but could also account for distress in the absence of life events.

Kanner et al. had 100 adults recount the life events and typical hassles of the prior month for each of 10 months. Participants also filled out the Hopkins Symptom Checklist in the first and tenth months and the Bradburn Morale Scale for the first nine months.

As predicted, hassles frequency correlated with later psychological symptoms, and life events added nothing to the prediction. An unfortunate

ambiguity in the analysis makes it difficult to conclude that hassles are uniquely predicting symptoms. Hassles frequency correlated with *prior* symptoms (r=.60), as well as with later symptoms (r=.49). This may be because some of the hassles could reflect psychological problems (e.g., trouble making decisions, not getting enough sleep), because some symptoms make certain hassles more likely, or because symptomatic people report and/or recall more hassles (Monroe, 1983b). Despite the strong correlation between initial symptoms and later hassles, Kanner et al. did not control for initial symptom level when predicting symptoms. Therefore the correlation between hassles and later symptoms could easily be a function of overlap between initial symptoms and hassles. Initial symptoms would be expected to correlate with later symptoms, and hassles could have been serving as a surrogate measure of initial symptom level.

Both the major finding and the confound were replicated in subsequent studies by DeLongis, Coyne, Dakof, Folkman, and Lazarus (1982), and by Burks and Martin (1985). A limited study by Flannery (1986) also produced correlations between hassles and anxiety and depression (r=.57). Strong gender effects hinder interpretation and none of the analyses controlled for initial symptom level or the effects of hassles (in life event analyses) or life events (in hassles analyses).

One unconfounded study (Monroe, 1983b) also showed that minor events are stronger predictors of distress than major events. Monroe found that hassles predicted later symptoms even when prior symptom level was controlled for, that initial symptom level was strongly related to later symptoms, and the interaction between hassles and initial symptoms was insignificant. Life events added nothing to the prediction of symptoms by hassles.

In conclusion, the hassles research shows that something other than change precedes distress and illness. Undesirability of situations is a strong candidate, since undesirable change and undesirable minor events both predict symptoms.

Multivariate research

Another way to find relevant aspects of situations is to factor analyze a group of variables to get at essential features which account for situation variance. This method, of course, relies on the researcher to come up with the right set of variables initially. Factor analysis cannot reveal dimensions which researchers neglect to measure.

Change and desirability are obvious candidates for inclusion. Controllability and familiarity are others: to Freud, it was obvious that the 'objects and situations about which anxiety is felt will . . . depend to a great extent upon the state of the person's *knowledge* and *feeling of power* regarding the outer world' (1923/1963) [italics added]. Some other possible characteristics are meaningfulness, felt responsibility for the situation, duration, and role area (Stone & Neale, 1982; Pilkonis, Imber & Rubinsky, 1985; Marziali & Pilkonis, 1986; Redfield & Stone, 1979; and Ruch, 1977). Three mulitivariate analyses confirm that change and undesirability are different aspects of stressful situations. They reveal other dimensions also. The first analysis is described mostly because it illustrates so many problems and shows why higher quality studies are needed. The others are included for more substantive reasons.

Pilkonis et al. (1985) had outpatients complete event checklists, and then rate events on 11 scales. The scales were: personal importance of the event, readjustment necessitated by the event, control over occurrence of event, prior

experience with similar events, desirability, social support available (more a context variable than a situation variable), stressfulness, importance of the event in determining the future, undesirability, degree to which the event was expected, and the responsibility the patient felt for the event. The authors did not explain how "control over event's occurrence" and "responsibility for the event" reflect different concepts. Similarly, they did not distinguish between the "personal importance of the event", the "importance of the event in determining the future" or "readjustment necessitated by the event". Chronic strains were not assessed, so the data represent only life change events. The raters suffered affective, anxiety, adjustment, or personality disorders, and so probably saw the world differently from non-disordered people.

Three factors were reported, but no indication is given about how the authors arrived at this number of factors. It is likely that additional factors were needed, since two items did not load on any factor. The first factor reflected desirability and stressfulness. The second reflected control over events' occurrence. The two items loading on this factor were 'control' and the parallel 'responsibility' items. Items loading on the third factor were the two 'importance' items and 'readjustment required', items with considerable conceptual overlap. *No* factors accounted for variance in social support or prior experience.

The study contained several potential methodological problems. Observations were not independent, since the data included an average of 7.5 events from each of only 64 patients. Detailed recall of events could have been a problem since patients were asked to describe events as much as two years old. Even simple recall for major life events declines by 5% for every month before the recall date (Stone & Neale, 1982). Another potential problem is that the anxious or depressed patients' mood could have biased ratings of life events (see

Sarason, Potter & Sarason, 1986).

Given the methodological problems with the study, the most parsimonious explanation of the results is that the factors which 'emerged' reflect simple language rules. Stressfulness and desirability may have loaded on the same factor because in ordinary language, stress implicates desirability. For example, the Funk and Wagnall Standard College Dictionary (Avis, 1980), defines the verb 'to stress' as "to put into straits or difficulty; distress" (pg. 1325). Similarly, responsibility and control are linked, and questions of importance are correlated. Pilkonis et al. used too few *different* situation variables to thoroughly describe situations. Having chosen variables with three general meanings, they obtained three factors.

Redfield and Stone (1979) attempted to assess the extent to which individuals differ in their ratings of life events on several dimensions. They used a rather short list of 16 life events, and had 85 students rate each on six scales. The scales were desirability/undesirability, gain/loss, stability/change, relief/stress, reassurance/worry, and meaningful/meaningless. The ratings were analyzed using three-mode factor analysis, which produced three event factors, three scale factors, and three person factors. The scale factors were characterized by desirability (defined by gain, relief, and reassurance), meaning, and change, respectively. The event factors were named 'personal catastrophe' (e.g., death of spouse or jail term), 'achievement' (e.g., graduation, better relations with others), and 'domesticity' (e.g., pregnancy, birth of child, and retirement). Interestingly, the three person types gave different scale ratings to the different event types. While events were not appraised the same way by all people, the existence of three person factors shows that the entire process is not totally idiosyncratic either. As with the other studies, the number and scope of scales used is a

limiting factor in the situation dimensions created. On the other hand, analysis of events yielded new factors which were not dependent on scales.

Another method of analysis which is not dependent on selection of rating variables is multidimensional scaling. Ruch (1977) analyzed the SRE with this technique. Students evaluated the usual intensity and length of time needed to adjust to various life events. Life change was not enough to account for variance in the data; with desirability and area of life change, she obtained a better fit to the data. The latter dimension was not as well defined as the former two, but there seemed to be one group of events which are personal and interpersonal (such as marital reconciliation or change in habits) and another which concerned finance and work, (such as obtaining a mortgage or change in responsibilities at work). This dimension is suggestive, yet frustratingly vague.

The domain of situations is hard to describe, yet is probably important also. The Ruch, and Redfield and Stone studies both found that events grouped together by type. Pearlin and Schooler's (1978) and Folkman and Lazarus' (1980) data showing that coping varies with the role area also support this idea.

Though little other research has been done on situation domain or *type*, many people have developed lists of interesting types. Cobb (1974), for instance, suggested that change in workload, role ambiguity, future ambiguity, change in responsibility, and personal loss would be useful categories. Magnusson (1985) sorted situations by the person involved (self, parents, other related adults, siblings, authorities, equals, 'dangerous people', people in general) and type (achievement or medical situations, accidents, common phobias, animals, archaic (inanimate) situations, supernatural-horror, and macrosocial. He also classified situations by expected consequences, such as bodily pain, injury, uneasiness,

unrealistic, personal inadequacy, loss of self control, death, punishment, guilt, shame, rejection, and separation. Ekehammer and Magnusson's (1973) factor analysis of situations produced five factors: ego threat, desirable, neutral, social, and pain factors.

Some other possible characteristics include complexity, clarity, strength, tasks, rules, roles, physical settings, goals, perceived controllability, expectancies, and emotions evoked by or needs and motivations linked to the situation (Magnusson, 1981). Block and Block (1981) suggested that structure, convergency (i.e., problem has one solution), divergency (open-ended problem), evaluation (person is evaluated by others) feedback provided, presence of barriers, need for exertion (mental or physical), malleability, desirability of outcome, and familiarity are aspects of problems. Argyle (1981) has used goal structure, repetoire of elements, rules, sequences of behaviour, concepts, environmental setting, roles, and skills and difficulties to guide his analysis of situations. Sarason, Sarason & Johnson (1985) considered physical illness, failure, loss of attachment, interpersonal change, victimization, and natural disaster to be useful categories of events. Relevant dimensions were thought to be change, desirability, predictability, controllability, personal significance, timing, and appraised meaning.

Finally, Murray (1938) and colleagues suggested classifying situations by the kind of effects they exert or are expected to exert on the person. These tendencies they called the 'press' (plural: 'press') of the situation. Press are roughly split into those which are beneficial and those which are threatening or harmful. The latter are conceptually linked to situations which require coping and so are quite germaine for a study of situations and coping. Although the press were described with reference to children's situations, many of them have adult equivalents, and so could be used to study the sorts of situations adults

encounter. For example, while lack or loss were discussed in terms of loss of toys or nourishment due to parents' poverty, adults are subject to lack or loss of possessions and may want materially also. Adults, as well as children, lose companions and can feel loneliness.

Murray's system is appealing because the press are linked explicitly to effects on the person and subsequent acts or experiences. Examples of reaction to the various press are affiliation, seclusion, self blame, passivity, retaliation, leadership, activity, emotionality, persistence, inhibition and elation. The relevance of these to coping should be apparent.

This overview of different taxonomies of situations may leave an impression of chaos. This would not be quite accurate. It should be apparent that the dimensions of change, desirability, control, meaningfulness, and chronicity are likely to be important in any description of stressful situations. It seems that situation *types* are also important, although it is less clear how they should be organized.

This issue of organization is quite important. Characteristics of systems should be carefully selected for their relevance to the human acts or experiences studied. Situations are so complex, and human imagination so fertile, that situations can be described any number of ways. If situations are to be used to account for behaviour and experience, the aspects of the situation singled out for study ought to be the ones which people respond to, which are therefore psychologically salient as well as conceptually meaningful. Murray's system, consisting of attributes of situations which give rise to certain reactions, exemplifies this. This principle has been used informally for decades in single variable experimental designs in which the researcher picks a situation (say a

staged social interaction in a lab) which varies along a dimension which is thought to affect some behavioural dependent variable. In the single variable case it is usually not difficult to pick a relevant dimension of situations. When the task is expanded so that a description *system* is produced, it is much more difficult. The characteristics chosen must not only be relevant to the behaviour to be explained, but the characteristics must also complement each other. Dimensions must not overlap too much, must have a similar conceptual basis, and together should be sufficient to describe most of the psychologically meaningful features of the situation.

The empirical section of this study will develop an account of situations which emphasizes independent dimensions and types of situations which are defined in part by the types and patterns of coping they elicit.

CHAPTER V

SUMMARY AND REMAINING QUESTIONS

When I introduced coping as a topic to be studied, I noted several questions which have since been partially answered from prior research. Coping does vary somewhat with different situations. Phases of an exam, presence of threat, loss, or challenge, different personal stakes, and features such as controllability, change, and meaningfulness, all influence coping. It is hard to summarize the exact connections between situation characteristics and coping because there is so little agreement about how situations ought to be described. However, available research has pointed out several dimensions which are probably important to coping. The meaning or type of the situation probably is important also, although there have been few systematic efforts to organize meanings into a system. Effects of role area or personal stakes as well as different coping with loss as compared with challenge show that type of situation matters. We await a thorough description of types and meanings.

The question of how personality and coping are related also remains incompletely answered. Various personality traits predict a portion of the coping variance, but there does not seem to be a consensus as to which traits are theoretically important. The possible field of traits has not been greatly explored. Studies have been largely limited to felt mastery and self-worth, although single studies have examined extraversion or anxiety, for example.

The different coping behaviors seem to be determined in different degrees by situation characteristics and personality traits. Some are more sensitive to influence than others. Once again, no global conclusions are possible because the structure of coping seems to vary so across studies. Studies have used between

2 and 28 different coping types. Factor analysis has been little help, revealing between 3 and 28 different factors (see, for example, Vitaliano, Russo, Carr, Maiuro & Becker, 1985; Jalowiec, Murphy & Powers, 1984; Parker et al., 1986; Rim, 1986; Beckham & Adams, 1984; Folkman & Lazarus, 1985; and McRae, 1984). Further confusion results from the fact that even a single scale (Ways of Coping) does not produce the same factors in different samples (contrast the Vitaliano et al., Rim, and Folkman & Lazarus analyses, which do not even show the same number of factors, although use of different factoring techniques might explain some of the discrepancy).

The relationship between personality and situation predictors remains uncertain. Because so few studies have examined both situations and personality factors together, we cannot conclude yet whether there are interactions, main effects, or both, and the relative influence of each on different coping styles is still a mystery. Indeed, the relative importance of the two sets of factors in general is not known, although researchers have been saying for decades that both are important and interact in the influence of behaviour (see, for example, Mischel, 1976, Endler & Magnusson, 1976, Pervin & Lewis, 1978 for exhortations of the use of interactional research paradigms).

Another problem in the study of these puzzles is to describe multivariate data succinctly and meaningfully. This can obviously be difficult when many relationships are to be described between multiple sets of variables. A reflection of this problem is that there are many, many descriptions of trees in the literature but very few maps of forests. This too makes it difficult to grasp overall relationships and to generate global theories and hypotheses.

The present study

The empirical study reported here is an attempt to remedy some of these problems. The state of current knowledge about coping seems to call more for description rather than the formal hypothesis testing which would be appropriate were there interesting and testable theories about coping. A currently useful description will be thorough and concise. Thoroughness requires that there be an adequate sampling of variables from the subject domains. That means that situations should be described by more than just loss, threat, or challenge categories, for example, and that coping variables cover a good range of possible responses to difficult situations. The situation variables chosen ought to include those which have had demonstrable effects on coping in prior research and/or those with theoretical relevance. If the relationships between personality and coping were to be examined in detail also, then personality ought to be assessed on several measures. Conciseness may be achieved by looking primarily at large patterns, using microanalytic techniques only to inform the overall description. This is easiest using multivariate techniques to look at the relationships between clusters of variables rather than taking variables one and two at a time.

Because the literature shows that different results are obtained from different groups of people and different situations, it would be useful to obtain information on more than one situation. So often it is not clear whether the results obtained are a product of the particular scale used, or the type of person surveyed, or the particular situations which were assessed. Repeated measures would allow any interesting results to be replicated to ensure that they are not a mere function of a peculiar set of data. Repeated measures also allow

assessment of consistency in coping across situations, which is another way of assessing the importance of person-specific rather than situation-specific effects on coping.

Although it would be interesting to relate a great many personality traits to coping, the practical requirements of a study may require that only a few are measured. It is fairly easy to obtain assessments of a variety of situation characteristics and to use these to find out which subsets are particularly relevant to coping. Personality assessment is typically a drawn-out matter by contrast. If self-report formats are used, then many questions are needed to get a reliable measurement. Every added scale places an extra substantial time demand on participants. Because of this practical limitation, just three personality traits were assessed. One of these, Locus of Control, has been used in several studies already, and is usually found to relate to coping. Flexibility is a trait which is conceptually important, but which has not as yet been examined in relation to coping. Finally, sociability was included because it ought to influence forms of coping related to social support, such as getting practical and emotional help.

Why might these particular traits be associated with coping? Internal locus of control ought to be associated with taking responsibility for situations' occurrence and resolution. If beliefs translate into action, then it should follow that belief in one's ability to control the environment would correlate with actual control attempts and less passivity and relying on others, other things being equal. Such beliefs might also translate into a tendency to assess situations as being controllable. More obliquely, the strong relationship between locus of control and self-esteem (see Folkman et al., 1986, and Fleishman, 1984) may mean that those with internal compared to external locus of control are not as

easily personally threatened by difficulties. They would not, therefore, have to deal with as much emotional disturbance. This should be reflected in less coping relating to emotional management. Locus of control might also reflect skill in controlling the environment, and control would be expected of those with the skills.

Flexibility has long been touted as characteristic of the mature personality. Neurotic people have been said to have rigid defenses, while integrated and healthy people are reality-oriented and adapt their behaviour (coping) to the reality principle. Flexibility has been shown by Wheaton (1983, 1985) to moderate the effects of some sorts of stress on depression, anxiety, and schizophrenia symptoms. Wheaton suggests that lack of flexibility is related to a narrowing of coping strategies, favouring a few in all situations. Antonovsky (1979) considers flexibility to be one of the three major variables which enter into the overall plan to overcome stressors. Flexibility, in his terms, "refers to the availability of contingency plans and tactics and of a willingness to consider them" (pg. 113). This 'readiness to change one's course' ought to be reflected in the different patterns of coping across situations. Antonovsky (1974) has suggested that this ability reduces stress. Garrity and Marx (1983) too found that the related trait, social conformity, together with life change, predicted later strain. Thus, flexibility should be reflected in increased variance in use of coping, unlike the locus of control, which ought to predict increased use of a particular set of strategies.

Sociability is a candidate for inclusion on theoretical grounds. Receipt of social support ought to be related to coping acts such as getting help or discussing feelings with others. Receipt of social support probably depends on personal characteristics. For example, warm, and outgoing people would be expected to have more contacts to draw on when troubled than recluses without

the patience for people. They may also desire such contact more. Hence, there ought to be a relationship between sociability and social sorts of coping.

These three characteristics are not intended to exhaust the pool of interesting and relevant characteristics. Two have received little attention before, even though there are reasons to think that they might affect coping. The other has been documented more thoroughly, and it would be useful to contrast prior results with those obtained with a different measure of coping and another sample. This would allow different research to converge on a set of common, scale and population independent, findings.

Specific questions

This study examines some of the broader relationships between characteristics of situations, personality traits, and coping acts. The data are based on people's reports of their responses to recent situations which they found stressful at the time. Four broad questions guide the inquiry as they guided the review.

First, what are the patterns of relationship between personality and coping? Which traits are related to which forms of coping? How strong are these relationships? Given that personality, in the broad sense, can be considered to be personal consistency across a variety of situations, how consistent are people in the use of various forms of coping across different situations?

Second, what are the patterns of relationship between dimensions and types of situations and coping? Which characteristics determine which forms of coping? How strong are these relationships? Which characteristics are most and least

important in determining how people cope? Which forms of coping are most and least contingent on situational characteristics?

Third, what are the relative roles of situation and person characteristics in the determination of coping? Is there a pattern which decribes the relationship between these two sets of predictors?

Fourth, and last, what is the structure of situations? Are there discrete types? Are there broad dimensions which characterize stressful situations?

I noted earlier that concise yet thorough descriptions are needed currently. Multivariate techniques such as canonical correlation and factor analysis will be used to show the broad patterns of relationships between groups of variables. Multiple regression will serve to describe the strength, rather than the nature, of the relationships between the variables. Hopefully this will produce a clearer description of the relationships between the many variables. Because thoroughness is important, situations will be described in more detail than has been attempted previously, and ten, rather than just two or three, ways of coping will be assessed.

CHAPTER VI

METHOD

Participants

Participants were 253 undergraduate volunteers drawn from undergraduate psychology classes at Simon Fraser University. Their mean age was 24.9 yrs, (standard deviation = 8.3 yrs). The median age was 22 years, and the range was from 16 years to 69 years. Thirty-two percent of the participants were male, 68% were female. Informed consent was obtained from all.

Measures

Personality

The personality measures selected were the California Personality Inventory (CPI) (Gough, 1975) flexibility and sociability scales, and the Rotter (1966) Locus of Control scale.

The CPI is a self-report personality inventory designed to assess "characteristics of personality which have a wide and pervasive applicability to human behaviour, and which in addition are related to the favourable and positive aspects of personality rather than to the morbid and pathological." (Gough, 1975, pg. 5). It is often used to assess personality in non-clinical populations. The inventory consists of a series of statements. For each statement, respondents note whether or not it is true about them.

According to the CPI manual, the sociability scale identifies persons "of outgoing, sociable, participative temperament" (pg. 10). High scorers tend to be

seen as "outgoing, enterprising, amd ingenious; as being competitive and forward; and as original and fluent in thought" (pg. 10). Low scorers tend to be seen as "awkward, conventional, quiet, submissive, and unassuming; as being detached and passive in attitude; and as being suggestible and overly influenced by others' reactions and opinions" (pg. 10.) One year test-retest reliabilities in high school students are .71 (females) and .68 (males). One to three week test-retest reliability was .84 in a prison sample. The 36 item scale produces a single score ranging 0 to 36.

The flexibility scale is intended to indicate the "degree of flexibility and adaptability of a person's thinking and social behaviour" (Gough, 1975, pg. 11.) Low scorers tend to be seen as "deliberate, cautious, worrying, industrious, guarded, mannerly, methodical, and rigid; as being formal and pedantic in thought; and as being overly deferential to authority, custom, and thought" (pg 11.). High scorers tend to be seen as "insightful, informal, adventurous, confident, humourous, rebellious, idealistic, assertive, and egoistic; as being sarcastic, and cynical; and as highly concerned with personal pleasure and diversion" (pg. 11). One year test-retest reliabilities in high school students are .67 (females) and .60 (males). One to three week test-retest reliability was .49 in a prison sample. The 22 item scale produces a single score ranging 0 to 22.

The Rotter Locus of Control scale is intended to assess people's generalized beliefs regarding the degree to which consequences are tied to their own behaviour. "Internal locus" signifies a belief that consequences are tied to their own actions, while "external locus" signifies that outcomes of events are not tied to their own action. The scale uses a self-report format. Each of the 23 items consists of a pair of statements. Respondents indicate which of the statements is most similar to their personal beliefs. Test-retest reliability (one

or two months between administrations) ranges between .49 and .78. Internal consistency is about .70 (Rotter, 1966). The scale produces a single score ranging between 0 and 23, where a high score indicates internal locus of control, and a low score indicates external locus of control.

Coping

A coping scale, modelled after a scale developed by Wong and Reker (1984), was developed specifically for this study (see Appendix A). The new coping scale is intended to be a shorter measure of the same ten coping constructs.

The first three sub-scales are different forms of problem-focussed coping. *Internal control* is coping by taking personal action to change the situation, and is the same basic construct as Lazarus' problem-focussed coping. *External control* involves change to the situation also, but this change is effected by second parties. Relying on others for advice or assistance are examples of external control. *Secondary control* (see Rothbaum, Wiesz & Snyder, 1982) is effected by changing one's own behaviour or attitudes in order to remove the problem, rather than trying to act on the situation.

The next four sub-scales are forms of emotion focussed coping. Included in this group are *wishful thinking, avoidance, emotional expression, and self-blame.* Wishful thinking includes wishing the situation were different and wishing for a miracle. Avoidance involves engaging in distracting activities or avoiding thinking about the situation. Emotional expression is releasing pent up emotions or expressing feelings to a confidante. Self blame is feeling sorry for what was done and blaming oneself.

The last three coping sub-scales tap *preventative, religious,* and *existential* coping. Preventative coping is coping which does not change the immediate problem, but which prevents further problems from occurring. Knowing one's own limits, maintaining relationships with close friends and family, and taking care of oneself physically and mentally during the crisis are examples of preventative coping. Religious coping involves following religious principles or relying on God to help in the situation. Finally, existential coping is a form of coping which emphasises the creation of meaning and the acceptance of the inevitability of a certain amount suffering in life. Antonovsky (1979) has written at length about the health implications of this sort of response to trouble. Wong and Reker (1984) report that they were able to correctly classify nearly all open ended coping responses using these ten categories. Furthermore, this system includes types of coping which differentiate successful and unsuccessful agers.

The Wong and Reker coping constructs were used as the basis of the new scale because of their breadth. Their scale includes most of the constructs commonly used in coping inventories and revealed in factor analyses, and includes several more interesting scales. In no other scale, for example, are the components of problem-focussed coping so carefully articulated. Existential and preventative coping are assessed in this measure alone. A new measure was needed because the long scale would have taken participants too long to repeat several times. This repetion was a necessary task in my particular research design.

The original scale has 57 items with between 4 and 11 items per sub-scale. The new Coping Scale has 20 items, two per sub-scale. Items consist of a statement about a form of coping (e.g., "depended on advice from others") and a 7 point scale used to indicate the degree to which the participant used the

described form of coping. The anchors used were "very much" at one and and "not at all" at the other.

The scale was designed as follows. A ten item coping scale was created first. Each item reflected one of the constructs described above. Pilot testing indicated that most of the ten items contained too many concepts to be easily, reliably, and validly used. A revised 15 item scale (5 one-item sub-scales and 5 two-item sub-scales) was then pilot-tested, but the single item sub-scales were still a problem. Eventually, each of the original single complex items was broken down into two simpler items reflecting a single simple concept. This resulted in their having increased convergent validity with the Wong and Reker scales and increased divergent validity among the scales, after the Campbell and Fiske (1959) method of multitrait-multimethod instrument analysis.

The final convergent validity coefficients (correlating the new sub-scales with the Wong & Reker subscales) ranged between .23 and .73, with an average value of .55. These figures are minimum estimates of the "true" correlation of the two sets of concepts, because the obtained validity coefficient is limited by the reliability of both scales. The lower the reliability of the original instruments, the lower the validity coefficients must be. Validity coefficients corrected for attenuation ranged were .72 (internal control), 1.00 (external control), .38 (secondary control), 1.00 (avoidance), .95 (wishful thinking), .72 (emotional expression), .78 (self-blame), .80 (preventative coping), .82 (religious coping), and .58 (existential coping), for an average value of .78. One week test-retest reliabilities of the revised scales were between .43 and .87 (mean Pearson correlation = .67). Appendix B documents the scale development in more detail.

Situation rating 1: dimensions

A second questionnaire (Appendix A) was created to allow the participants to rate stressful situations. The first part asked questions relating to dimensions of situations, including the controllability of the situation's onset and resolution, the desirability, meaningfulness, familiarity, and duration of the situation as well as the amount of life change and overall stress caused by the situation. These questions include the issues of change and desirability that have been pursued in the stress literature over the past twenty years. They also examine certain aspects of the situation which could on the one hand affect its stressfulness (eg, desirability and meaningfulness), and on the other relate to coping (eg, controllability and duration). Participants used seven point scales to rate the the situations. The wording of the anchors varied from scale to scale, but reflected in most cases the idea of "very much" to "not at all". For example, the anchors with the question, "How much control did you have over the situation's occurrence?" were "total control" and "no control at all." The 9 variables measured with this scale will be referred to as situation *dimension* variables.

Situation rating 2: types

The second part of the situation questionnaire assessed the content type of the situation. This was done because a situation may have a quite different meaning, (hence emotional impact, hence coping), depending on its content even though other factors may be the same. For example, a person might rate a flat tire and a refusal for a date both as acute, minor, unexpected, novel, undesirable, and moderately stressful events, yet the meaning of these two events is quite different. The first situation might be a simple misfortune, but the second involves rejection and possible threats to self esteem. McCrae (1984) and

Folkman et al. (1986) support this conclusion with their findings that events classified by type elicited different patterns of coping. Because there is likely more to situations than McCrae's categories of loss, threat, and challenge, and because the Folkman et al. classification of personal stakes was not available, a more detailed list of characteristics was sought.

A possible typology was found in Murray's (1938) work on environmental *press*. The press of a situation is its tendency to induce a certain type of action in the person. This is exactly what is studied here.

Nine of Murray's press applied to stressful situations, and four new press were added after pilot testing. All items finally used were endorsed by at least one third of the pilot groups. Relevant items which participants frequently wrote in were added. The 13 items used were: danger or misfortune, lack or loss, something being withheld, rejection, aggression, dominance, coercion, deception, illness, personal failure, added responsibility or work, physical discomfort, and challenge or opportunity. Participants indicated which of the items were actual or anticipated parts of the situation at the time. The scores, therefore, are dichotomous. Anticipated as well as actual characteristics were included because the anticipation of some events could be stressful. For example, anticipated failure may be as stressful, though in different ways, perhaps, as accomplished failure. The 13 variables assessed in this scale will be referred to as situation *type* variables.

One week test-retest correlations for Dimension and Type sub-scales were between .95 and .57, with an average of .79.

A list of stressful situations (see Wong & Reker, 1984) was provided to help participants recall which stressful situations they had experienced in the

previous six months. This list contained a set of events typical of life events inventories, (e.g., Sarason, 1978) and a set of chronic stressors and stressors of the "daily hassles" variety (cf. Kanner, Coyne, Schaefer & Lazarus, 1981). It was selected because it is very extensive and includes stressors which are not included in other inventories. It was not used to measure life stress; rather, it was simply a list from which participants could choose personally experienced stressful situations. Since it was used as a memory-aid rather than a measure, its reliability and validity are not important for the purposes of this study.

Procedure

Participants first filled out the three personality scales described. Then they indicated which of a variety of stressful situations had befallen them in the prior six months, and selected the most recent three of these for the analysis. They rated each situation using the Dimension and Type scales, and reported their reaction using the Coping scale. The coping qustionnaire also asked them to describe anything else about their reaction which they deemed relevant. This was done to make sure that they were able to describe important aspects of the situations and coping which were not anticipated by the questionnaires.

I was available to answer questions while participants filled out the questionnaire. They were given the opportunity to ask questions about the research afterward. A handout explained further the study's focus and design and informed them how, where, and when they could learn the results of the research.

CHAPTER VII

RESULTS

Data preparation

The data were pre-processed using several procedures in order to prevent potential problems with outlying cases, missing data, and strongly skewed variables.

Multivariate outliers can be a problem in multivariate analyses because they have undue influence on correlations. Outliers were identified by noting cases with Mahalanobis' distances which were both extreme and separate from the rest of the distribution of distances. These extreme distance values were identified using a box-and-whisker plot and a histogram of the distances. The three sets of data, corresponding to the three situations identified by participants, were analyzed separately. Seven cases were removed from the 1st set, 4 from the 2nd, and 7 from the 3rd. Because some of the same cases were deleted in all three instances, only 9 cases were entirely or partially deleted. In addition, one case was removed because the respondant marked "not at all" on all but one of the scales. Another case was deleted because the questionnaire was filled out incorrectly. Eight people did not provide information on any situations at all, and were not included in any analyses.

Missing data can be problematic because a few scattered missing observations can reduce the size of the entire data set considerably in analysis: all values in an otherwise complete case may be ignored because of a single missing value. In the present study, missing data resulted from participants overlooking an entire page of questions or not responding to the occasional

question. Missing from situation 1 data were 70 observations, representing 0.7% of the total. Missing from situation 2 and 3 were 0.5% and 0.5% of the points, respectively.

Missing points were estimated to allow the data set to remain as complete as possible. The first step in the estimation procedure was to delete outliers previously identified. Then further cases were deleted if more than 50% of their values were missing. If the missing item was from the Coping or Situation scales, missing sub-scale scores were estimated. In the case of personality scales, if more than 5 items were unmarked, the score was considered missing and was estimated. Missing data points were estimated using the BMDP PAM twostep regression procedure (Dixon, 1985). Estimators were drawn from the same situation data as the missing value. This maintained the distinctness of the three data sets.

The final number of complete cases from each data set were 253, 238, and 220, respectively, from initial pools of 260, 242, and 227 cases. Because of the length of the questionnaire, some groups of participants ran out of time and so could only complete one or two situations. This accounts for the difference in the sizes of the three sets of situation data.

Skewness can be a problem in that correlations between severely and oppositely skewed variables have a range less than -1 to +1; thus, correlations between such variables are attenuated. Because the analyses used (mainly multiple regression and canonical correlation) were based on correlational data the soundness of the initial correlation matrix is important.

Two of the variables (self-blame and religious coping) were skewed in the opposite direction from other skewed variables, and were reverse scored for the

purpose of analysis, thus preventing artificial attenuation of correlations. Reports of analyses will omit this reversal, however, so that all coping variables can be read the same way in tables. No skew was sufficiently serious to have any substantial effect on correlations, so further transformations were deemed unneccesary. Dichotomous data for the most part had standard deviations in the .5 range. The most skewed dichotomous variables were endorsed in 17% of cases. Most other dichotomous variables were endorsed in 30% to 50% of the cases. All skews were in the same direction. Because the standard deviations were in the moderate range and because the skews were in the same direction and not severe in most cases, the correlations between dichotomous variables should not have been attenuated. The final matrices of correlations are presented in Appendix C.

Relationship of personality variables to coping

The personality variables of locus of control, sociability, and flexibility were generally poor direct predictors of coping. A canonical correlation analysis was done between the three personality scores and the ten ways of coping. This analysis produced one significant canonical correlation (.31) χ^2 (30) = 53.89, p = .0047. (see Table 1)(loadings greater than or equal to .30 are shown in bold face). This was defined by high sociability and external locus of control on one side and high use of preventative coping, emotional expression, and not wishful thinking on the other. The pair of canonical variates accounted for 41% of the personality variance and 11% of the coping variance, respectively. The redundancy (the predictability of the coping variables from personality information) was 4%. Regression of the coping variables on the personality variables produced very small adjusted R^2s (.04, .04, and .02 for sociability, locus of control, and

Table 1.

Canonical Correlations Between Personality variables and Coping

Personality	Correlation between variable and canonical variate	Coping	Correlation between variable and canonical variate
Sociability	**.75**	Prevention	**.62**
Locus of control	**.77**	Wishful thinking	**-.50**
Flexibility	.28	Express emotion	**.43**
		Internal control	.29
		Secondary control	.29
		External control	-.06
		Distraction	-.22
		Self blame	.26
		Religious coping	.13
		Existential coping	.10
% of variance	41%	% of variance	11%
Redundancy	.04	Redundancy	.01
Canonical correlation:	.31		

flexibility, respectively). These values are not significantly greater than zero. Only two of the coping variables were predicted by personality at above conventional chance levels. Personality variables accounted for 4% of the variance in both wishful thinking and preventative coping (*F*s (3, 249) = 4.9 and 4.7, p = .003). Flexibility, which was not related to coping directly, had indirect effects which are discussed later.

Consistency of coping strategies across different situations provides evidence of other person effects. Consistency analysis does not rely on measured 'traits', but rather uses patterns of behaviour which are consistent across and independent of situations as an indicator of the power of the effect of latent personal characteristics. Consistency in coping was assessed using the Hoyt reliability index (Brown, 1976), defined as 1 - (MS person x situation interaction / MS persons), where within-subject analysis of variance is used to determine the variance in persons, situations, and the interaction. Situation variables were partialled out so that any measured similarity between situations could be controlled. The partial correlations represent, as nearly as possible, trait-like coping effects. The following values were obtained for coping residuals across independent situations: internal control (.28), secondary control (.35), external control (.36), self blame (.43), distraction (.43), wishful thinking (.59), emotional expression (.70), preventative (.70), existential (.72), and religious coping (.91). These findings support the idea that some forms of coping are used consistently by people regardless of situations. They also suggest that other forms of coping are not used so consistently.

It is possible, of course, that consistency could be due to similarity in situations which was not measured, although the breadth of the questionnaire and the rarity of "other" responses argues against this. It is also possible that

consistency reflects response bias rather than real reactions. Responses may be based less on recall of real behaviour than on the beliefs of the respondants of the sorts of things they are likely to do or ought to do. This possibility cannot be ruled out without resort to direct observation of coping and comparison of these observations with self-report. There are four reasons to believe that overt bias was not a major problem. First, there were few obviously desirable answers to coping items. Second, the participants' anonymity was assured. Third, participants were encouraged to report their responses as honestly and thoughtfully as they could. Finally, many of the written responses were extremely frank and very personal, evidence that people were responding to the task with sincerity.

Relationship of situation variables with coping

Canonical correlation analysis was performed to assess the relationships between situation variables and coping variables in the first situation data set. Situation variables were divided into those which apply to all situations and are continuous (situation 'dimensions') (e.g., controllability) and those which reflect types of situations and are present or absent (situation 'types') (e.g., presence of failure or aggression). A principal component analysis of the first situation's data showed that these two sorts of variables loaded onto different factors. Factors defined by 'type' variables had low loadings by 'dimension' variables, and vice versa. (Appendix D contains factor loading matrices which illustrate this). Hence, these two sets of situation variables were analyzed separately.

When situation Dimensions were studied in relation to coping efforts, three canonical correlations were significant, using Bartlett's test at the .01 probability

level. With two canonical correlations included, $\chi^2(56) = 108.31$, ($p < .0001$), while with three, $\chi^2(42) = 63.05$ ($p = .019$). Table 2 shows the analysis of the three pairs of canonical variates. Correlations between variables and canonical variates greater than or equal to .30 are shown in bold face.

The first pair of variates shows that stressful change in lifestyle (somewhat enduring and meaningful) is reflected in adjustment of behaviour and attitude, taking direct control and getting help and to a lesser extent expressing feelings and not blaming self. This might be labelled a life transition dimension.

The second situation variate involves a stressful situation which was uncontrollable, not initiated by the person, undesirable and somewhat unexpected. The primary coping response to this is wishful thinking and *not* taking direct control, or using preventative and existential coping. This may be interpreted as a personal disaster dimension.

The third situation dimension seems to reflect personal fortune or failure. One pole of this dimension involves an uncontrolled yet desirable event which is not stressful. The other pole involves an undesirable and somewhat stressful event, the occurrence of which was controlled. The main coping response at this pole is self blame. Along with this is taking control, distraction, wishful thinking and *not* telling others or expressing feelings. Those who met good fortune, at the other pole, express their feelings and tell others, and not blame themselves, wish it were different or avoid thinking about it. In two identical analyses in the two remaining data sets, the transition dimension was replicated both times, and the disaster and failure dimensions were approximately replicated once each.

Three canonical correlations between situation *types* and coping were also significant, using Bartlett's test at the .01 level. With two canonical correlations

Table 2.

Canonical Correlations Between Situation Dimensions and Coping

	Correlations between variables and canonical variates			
Situation dimensions	1st variate	2nd variate	3rd variate	
Change	**.87**	-.10	.26	
Stressfulness	**.66**	**.55**	**-.30**	
Meaningfulness	**.36**	.14	-.07	
Duration	**.35**	.14	.21	
No control start	-.14	**.82**	**.41**	
Undesirability	.00	**.66**	**-.38**	
No control end	.13	**.57**	-.11	
Unanticipated	.11	**.35**	.08	
Unfamiliarity	.06	-.08	.06	
Percent of variance	17%	21%	6%	Total=44%
Redundancy	6%	6%	1%	Total=13%
Coping				
Secondary control	**.74**	**-.10**	.26	
Internal control	**.56**	**-.35**	**-.35**	
External control	**.53**	.27	.23	
Self blame	**.31**	.19	**-.64**	
Express emotion	**.43**	.10	**.33**	
Wishful thinking	.26	**.70**	**-.37**	
Prevention	.05	**-.34**	.25	
Existential coping	.22	**-.34**	.13	
Distraction	.08	.26	**-.34**	
Religious coping	-.22	-.02	-.16	
Percent of variance	16%	10%	11%	Total=37%
Redundancy	6%	3%	2%	Total=10%
Canonical correlation	.60	.51	.41	

included, $\chi^2(88) = 124.67$, $p = .006$; with three, $\chi^2(70) = 89.32$, $p = .06$. Table 3 shows the analysis of the three pairs of canonical variates. The first situation variate is largely defined by failure, though danger or misfortune, deception and physical discomfort have moderate loadings. The coping response to this is a combination of self blame, wishful thinking and distraction. This pair of canonical variates is easily labelled "failure".

The second situation type variate reflects mostly challenge or opportunity, with elements of increased workload and rejection. The main coping response associated with this is changing of attitudes and beliefs with attendant attempts to control the situation through one's own acts or by relying on others. Religious and existential coping and non-blame have lower loadings. An appropriate label for these variates would be challenge or opportunity.

The last situation type construct is slightly more complex, but can be interpreted as a personal lack or loss. This event type is characterized by lack or loss, with a degree of aggression, deception, non-failure, danger or misfortune and something being withheld. These might all be present when being jilted, for example. The main coping response associated with this type of situation is emotional expression, with some wishful thinking and direct action and little self-blame.

The robustness of these pairs of situation-coping dimensions was tested in replication analyses in two further data sets. The failure-blame dimension is quite robust, as it was clearly present in both replications. The challenge-adaptation dimension was also repeated, but only in the second situation set. The lack/loss dimension was not clearly present in either replication.

Table 3.

Canonical Correlations Between Situation Types and Coping

	Correlations between variables and canonical variates			
Situation types	1st variate	2nd variate	3rd variate	
Failure	**.78**	-.29	**.31**	
Danger/misfortune	**.35**	-.25	**.35**	
Discomfort	**.40**	-.10	**.31**	
Challenge	-.23	**.76**	.18	
Rejection	.25	**.38**	-.01	
Workload	.00	**.39**	.21	
Lack/loss	.11	-.24	**.75**	
Withheld	.18	-.05	**.49**	
Aggression	.25	-.19	**.47**	
Deception	**.38**	.05	**.48**	
Dominance	.23	-.26	-.08	
Coercion	.28	-.18	-.18	
Illness	.12	-.28	-.21	
Percent of variance	11%	10%	13%	Total=34%
Redundancy	4%	2%	2%	Total=8%
Coping				
Self blame	**.78**	.30	**.39**	
Distraction	**.51**	.22	.08	
Wishful thinking	**.51**	**.70**	**-.33**	
Secondary control	.11	**.76**	.06	
Internal control	-.19	**.42**	**.36**	
External control	-.16	**.44**	.21	
Religious coping	.18	**-.40**	-.14	
Existential coping	-.05	**.33**	-.19	
Express emotion	-.16	.15	**.65**	
Prevention	.14	-.24	.10	
Percent of variance	13%	15%	9%	Total=37%
Redundancy	4%	3%	1%	Total=9%
Canonical correlation	.59	.47	.37	

Flexibility as a moderator of the situation-coping relationship

Unlike sociability and locus of control, it may be argued that flexibility ought to moderate the relationship between situations and coping, rather than influence coping itself. To assess this, the respondents were divided into high and low flexible groups about the median, and separate canonical correlations between situation variables and coping were performed. If people who are flexible respond to the features of the situation rather than rely on a limited strategy in all cases, their coping ought to be better predicted by the characteristics of the situation than the coping of the less flexible people. More coping variance accounted for in the more flexible group and more significant canonical correlations would support this hypothesis.

There was one significant canonical correlation in the low flexible group (correlation = .73) (χ^2 (220) = 317.59, $p < .0001$), but three in the high flexible group (correlations = .73, .72, .65) (χ^2 (220) = 379.04, $p < .0001$; χ^2 (189) = 296.22, $p < .0001$; and χ^2 (160) = 217.56, $p = .002$). The redundancy of situation variables on coping was .04 in the low flexible and .12 in the high flexible group. The average variance accounted for in coping by situations was 10% in the low but 15% in the high flexible group. These results are consistent with the hypothesis that the coping of flexible people is more responsive to the features of the situation than that of inflexible people.

Responsivity of coping variables to situation variables

As the previous canonical correlations show, coping types vary in their responsiveness to situations. The low loadings of religious, existential, and preventative coping on canonical variates show that these forms of coping, for

example, are not contingent on the characteristics of the situation. In contrast, the high loadings of secondary control and self-blame indicate that these are more dependent on situation variables defining the companion canonical variate.

To make the differences more explicit, all situation variables were regressed on each coping variable in all situation data sets. Table 4 shows the adjusted R^2 values obtained in each situation, as well as the average of these values. Self-blame, secondary control, wishful thinking, and internal control are thus shown to be the most predictable, followed by external control, expression of emotion and distraction. Finally, preventative, religious, and existential coping were predicted the most poorly. Essentially the same pattern is produced when situation *dimensions* and *types* are considered separately.

Relative roles of consistency and contingency in coping

The prior analysis shows that some forms of coping are more contingent on situational characteristics than others. Other data show that some forms of coping are also used more consistently by a given individual than others. If a form of coping is highly contingent, people should use it only in selected situations, and it would not be a part of their routine coping style. Conversely, if a form of coping is used with some consistency, then the exact features of the situation faced should have little influence on its use. As a result, an inverse relationship might be expected between consistency and contingency in the use of various forms of coping.

This idea may be readily tested in the data described earlier. The consistency index reflects the tendency of people to cope in similar ways whatever the situation. The adjusted R^2 figures in Table 4 above reflect the

Table 4

Adjusted Squared Multiple Correlations of All Coping Variables on Situations

	1st situation	2nd situation	3rd situation	Average
Self blame	.27	.35	.26	.29
Secondary control	.25	.28	.35	.29
Wishful thinking	.18	.25	.22	.22
Internal control	.15	.20	.11	.15
External control	.16	.11	.10	.12
Express emotions	.10	.09	.14	.11
Avoidance	.09	.09	.06	.08
Prevention	.06	.00	.13	.06
Existential	.03	.06	.03	.04
Religion	.03	.00	.08	.04

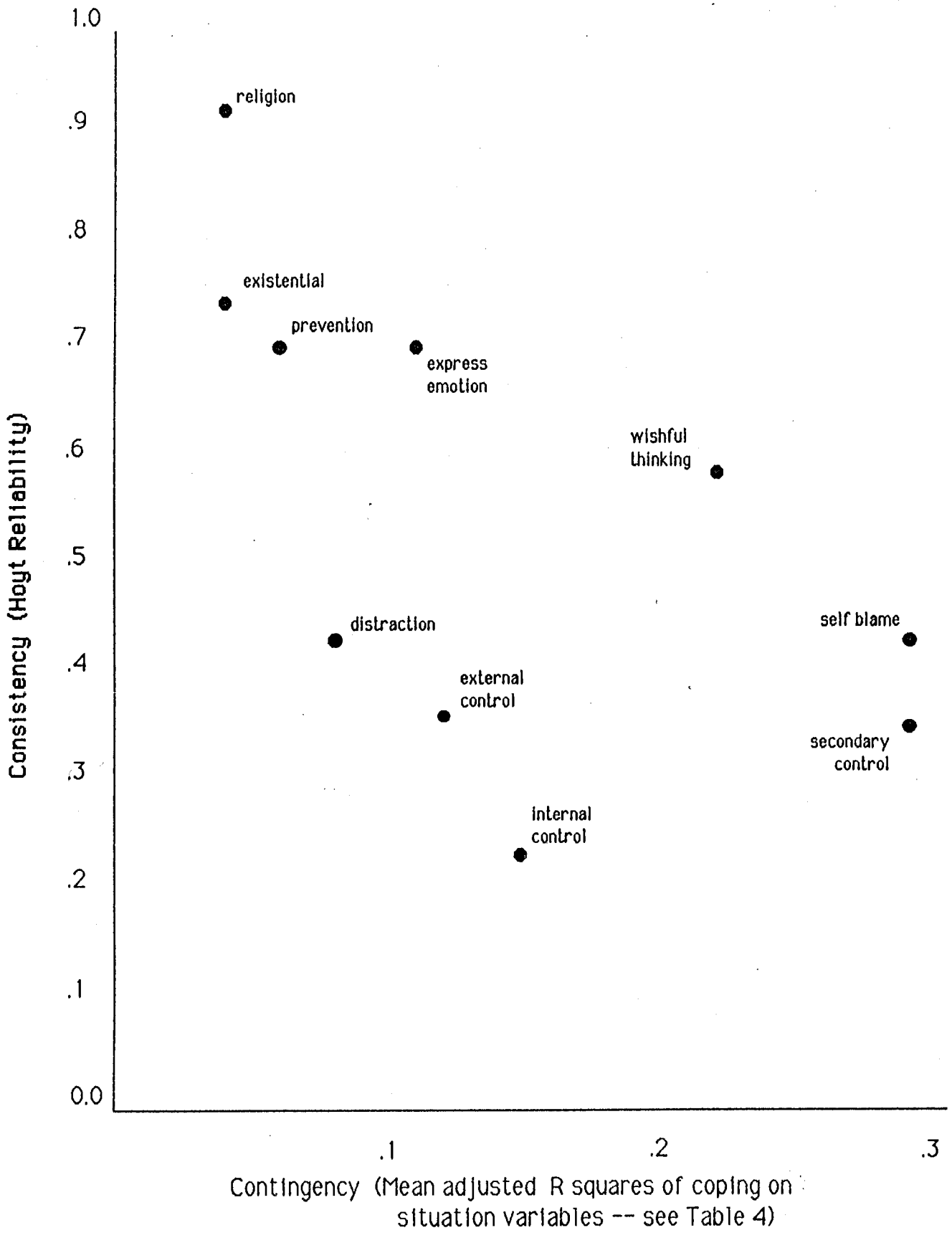
contingency of coping on situations. Figure 1 is a plot of consistency against mean contingency. Each point represents a different form of coping. There is an obvious inverse relationship betweeen consistency in the use of coping and the degree to which coping depends on situation characteristics. The correlation of these is -.61. This number is used only as a measure of association to aid description of the scatter of the points.

Relevance of situation variables to coping

Just as some forms of coping are more contingent than others on situation characteristics, some of the situation variables measured are more predictable from coping variables than others. Most variables had significant squared multiple correlations with coping variables. Those with the consistently highest multiple correlations were: amount of life change (27% variance accounted for), control over the start of the situation (23%), stress (18%), control over the outcome of the situation (17%), desirability (16%), potential or actual failure (21%) and challenge or opportunity (11%). It can be inferred that these variables, therefore, are relatively important in the determination of coping.

The situation variables that had insignificant multiple correlations with coping in two or three data sets were familiarity or novelty, degree to which the situation was expected, and the presence of dominance, aggression, deception, and coercion. The latter four variables may not have been related to coping because they were rarely endorsed (less than 20% of situations). Restriction of range of this sort would be expected to attenuate correlations. The first two, though, were not unduly skewed, so it is likely that the lack of effect is not an artifact.

Figure 1: Coping variables consistency vs. contingency on situation variables



Structure of situations

As was noted earlier, increased information about situations' structure and essential characteristics is needed for a better understanding of how people cope with stressful situations. The group of students who participated in this study reported 711 different situations, yet these situations varied within a clear structure. The 9 situational dimensions and 13 situational types were subjected to common factor analysis (varimax rotation) in order to describe this structure. See Tables 5 and 6 for the results of the analyses of the first set of data.

Situation types and situation dimensions were eventually analyzed separately. An initial component analysis performed on all variables together showed that type and dimension variables did not load on the same factors. When fewer factors were extracted, in accordance with a scree test of the eigenvalues, this was still the case, interpretation was not made easier, and the structure was more complex. Conceptually, as well, the two sets of variables do not conform. Separate analyses produced simple and interpretable structures. Replications of both dimension and type analyses in the second and third situation sets produced similar structures, and so are not reported.

When just the dimensions of situations were studied in this manner, two factors were eventually retained. The three-factor model fit the data marginally better, but the two factor model was more interpretable. Fit was defined in terms of the average squared residuals of the initial correlation matrix. Smaller numbers indicate better fit. The fit was .72 in the one factor solution, .15 in the two factor solution and .04 in the three factor solution. The first factor, defined by lack of control over either initiation or outcome of the situation, undesirability, unexpectedness, and stress, may be interpreted as a disaster

Table 5

Rotated Factor Loadings and Communalities in Two-Factor Common Factor Analysis of Situation Dimensions

Variable	Factor 1	Factor 2	Communality
No control start	**.77**	.03	.59
Undesirability	**.68**	.04	.47
Unanticipated	**.78**	.09	.24
No control end	**.39**	.00	.15
Stress	**.31**	**.61**	.46
Change	-.09	**.59**	.36
Duration	-.10	**.54**	.30
Meaningfulness	.06	**.44**	.20
Unfamiliarity	.08	**.33**	.10
Label	Disaster	Transition	

dimension. The second factor (defined by stressful, meaningful, enduring change and some novelty) may be labelled a life transition dimension.

A similar procedure was followed to identify factors of the situational type variables, and four factors were retained. The measures of fit, as defined previously, were .82, .29, .20, and .12 for the one, two, three, and four factor solutions respectively. The four-factor solution fits the data slightly better than the three-factor solution and is easier to interpret. Table 6 shows the loadings of the variables on factors. The first factor represents victimization: coercion, dominance, and aggression are all featured. The second is rather complex, and seems to represent loss of either an object or of self-esteem or both. Rejection, witholding, and lack suggest object loss, while rejection, failure, and deception suggest loss of esteem. This set of features might all be present during a betrayal of a close relationship. The third factor consists of situational characteristics related to physical harm: physical discomfort, illness, and danger or misfortune are salient features in such situations. The final type dimension involves a challenge or opportunity involving increased work or responsibility, but with the potential for failure also. A promotion is one example which would fit this class, as is the end-of-term scenario familiar to all of the student participants of this study.

Table 6

Rotated Factor Loadings and Communalities in Four-Factor Common Factor Analysis of Situation Types

Variable	Factor 1	Factor 2	Factor 3	Factor 4	Communality
Coercion	**.69**	.14	.06	.07	.50
Dominance	**.62**	.17	-.03	.11	.42
Aggression	**.44**	.14	.06	.07	.30
Rejection	.24	**.58**	-.07	.02	.40
Withholding	.15	**.42**	.11	.03	.21
Failure	.06	**.41**	-.03	**.38**	.31
Deception	.24	**.39**	.18	-.13	.25
Lack/loss	.04	**.35**	**.34**	-.16	.27
Danger	.13	**.30**	**.58**	-.05	.45
Discomfort	.09	.01	**.48**	-.01	.24
Illness	-.06	-.03	**.56**	-.09	.32
Challenge	.08	.05	-.17	**.56**	.36
Workload	-.01	-.09	.00	**.49**	.25
Label	Victim-ization	Loss	Physical harm	Challenge	

CHAPTER VIII

DISCUSSION

The previous analyses reveal some of the broader patterns and strengths of the relationships between personality, situation characteristics, and coping. A summary of the basic findings is as follows.

One useful finding involved the specific relationships between qualities of situations and the coping which followed from them. The existence of multiple canonical correlations between situation variables and coping supports the idea that stressful situations vary along several dimensions and that patterns of coping are contingent on the qualities of the stress involved. Certain situational characteristics seem to pull for certain types of responses. Though Sidle et al. (1969) were able to say this much, they were unable to make connections between specific situational characteristics and coping acts. The present study, in contrast, allows us to identify the aspects of situations which do the "pulling" and the associated coping efforts which are "pulled".

Some of the relationships found are not surprising: stressful changes are met with adaptation and personal and delegated attempts to control the change, while uncontrollable personal disasters result primarily in wishful thinking and few control attempts. People blame themselves and avoid thinking about failure, and express feelings when they experience a personal loss.

The approach used in this study is helpful since it assesses the situation characteristics directly and does not rely on inference based on, for example, role area, as has been done in some studies (e.g., Pearlin & Schooler, 1978, Folkman & Lazarus, 1980). Pearlin & Schooler, to quote Folkman & Lazarus, (1980)

"were puzzled by the infrequent use of strategies directed at changing the situation and by the resistance of problems at work to amelioration through coping efforts. They suggested that this might be due to the impersonal and chronic nature of problems in the work area" (pg. 230). Had Pearlin and Schooler assessed the impersonality and chronicity of work- related problems, they might not have been puzzled. Although the current results support the idea that situations can be classified by type, there was no indication that role areas represent discrete and unambiguous types of situations, especially with respect to coping. Indeed, it is quite easy to suppose that some work-domain problems are quite different. Surely problems with a direct superior experienced as an employee would be very different from problems experienced as a manager of a subordinate, since these involve quite different interpersonal roles on the part of the person with the problem. The fact that prior studies demonstrated some differences in coping across role areas indicates that there must be some similarities in situations within domains so that, on average, work problems are different from domestic problems. However, the fact that a given problem lies within a domain gives the researcher relatively little, and then only probabalistic, information about the characteristics of the problem. In the present study, though, most of the relationships between situation dimensions and coping dimensions were very easy to interpret because important qualities of the situation which were correlated with subsequent coping were known.

The complexity of the coping done in response to the different situations shows that people cope on many different levels. For example, in situations of challenge or opportunity, people use wishful thinking (emotional level), attempts to control the situation and personal adaptation (pragmatic level), and existential coping (meaning level). This complexity is consistent with the existence of many

levels of the interaction between a person and a problem. A problem exists as an arrangement of elements in an environment, has an emotional impact which may need attention, and may induce changes in thought and attitude as well. The existence of a meaningful pattern in the coping across these levels shows that coping is a coordinated activity. For instance, failure is both painful and irrevocable, and it follows that one would feel sorry for one's failure, wish it had not happened, and try not to dwell on it. In this case, there is a coordinated response to the reality of the failure (sorrow), the helplessness to change the situation (wishful thinking) and the pain (distraction).

The collective ability of situation variables to predict coping efforts varies across different types of coping. Some forms of coping are fairly predictable from situational characteristics, while others are less predictable. Self blame and adaptation are the most dependent on situation characteristics, and it is hard to imagine that they would not be so. One can hardly blame oneself if nothing has gone wrong, nor can one adapt to an unchanging situation. On the other hand, religious and existential coping were largely independent of the situation characteristics measured in this study. It appears that these sorts of coping are more dependent on the personal characteristics of the coper than the features of the situation. The personal characteristic responsible may be a sense of meaning and coherence in life, which Antonovsky (1979) suggested is a fundamental personal resource. Religious and existential coping are the obvious correlates of this resource, and so would be expected to be somewhat stable. Two prior studies (Aldwin, Folkman, Coyne, Schaefer, & Lazarus, 1980, cited in Folkman & Lazarus, 1981, and Folkman et al., 1986) have also found something similar. Aldwin et al. found that the most consistent coping factor involved strategies used to interpret stressful events as opportunities for personal growth. Folkman

et al. found that the form of coping which was the most consistent was "positive reappraisal". These strategies involve efforts to seek personal meaning in otherwise noxious events reflected in the definition of existential coping used in the present study.

One of the most interesting findings was the relationship between situation and person variables in the determination of coping. Some coping variables were mostly determined by person variables and were not at all responsive to characteristics of the situation, others were primarily determined by the situation, and the rest were under joint influence. There seemed to be a trade-off between situation and personality influence. It is likely that some coping strategies are integral to the personality structure of the coper, and to be used must be used consistently or not at all; they cannot be simply called up on occasion in certain situations. For example, religious coping requires a pre-existing belief and value structure if it is to be used. Some people have such a structure, others lack it. Those who lack it will be unlikely to rely on the advice of a priest or look for spiritual guidance in any situation. Their religious coping would not be contingent on situations, since they have no place for religion in their lives at all. For those who do have religious beliefs, and for whom religion is an important part of their everyday lives, its precepts seem to be applicable to many problems. This would again result in a lack of specifity in terms of situations.

In contrast with the highly consistent but non-contingent coping are the coping efforts which seem to have high situational specificity and are not used consistently across situations. These forms of coping seem to be a part of everyone's repertoire and are used only when appropriate. Adaptation was already used as an example of a form of coping which simply would not apply to

certain situations, namely, situations which do not involve a lot of change. As a result, within-person consistency would not be expected unless the situations faced were very similar.

To my knowledge, no-one has ever suggested that there is an inverse relationship between the effects of person and situation variables on different forms of coping. The data shown here suggest that such a relationship does exist. There is also a plausible explanation for the effect which would bear further scrutiny and empirical exploration. If there does turn out to be a reliable continuum on which different sorts of behaviours fall, it would be interesting to sort many different behaviours on this continuum and try to find out what it is about each behaviour which accounts for its location. This would help to reveal its connections with personality variables on the one hand and the context of the situation on the other.

The personality traits of locus of control, sociability, and flexibility are weakly related to coping behaviours. The relationships are both direct, in that a trait may be correlated with some specific pattern of distinct coping efforts, and indirect, in that the trait changes the relationship between situation variables and coping. More specifically, high sociability and external locus of control were associated with maintenance of relationships with others, looking after self, emotional expression, and less wishful thinking. People who were high in flexibility did not use one form of coping more than another, but rather let the characteristics of the situation have more influence over the form of coping used. This is consistent with Folkman & Lazarus' (1981) speculation that flexibility as a trait is tied to variability in coping.

The high consistency with which people used several of the coping behaviours (e.g., religious coping) across situations is evidence that some unmeasured person variables were at work. A sense of coherence, as suggested by Antonovsky (1979) is one possible trait relating to existential and religious coping. Other characteristics, relating to the consistent use of preventative coping, and emotional expression, are as yet unknown. It is apparent that personal factors were more important for some types of coping than others, since consistency of use of different types of coping varied widely. Religious, existential, and preventative coping, and emotional expression, forms of coping which might be applicable to any situation, were used most consistently, while taking direct control, control though adaptation, and delegated control were all used the least consistently. The question "how important is personality in determining coping?" cannot, therefore, be answered in one statement. Personality will likely be quite important in some behaviours, less so in others.

The final question of this study concerned the structure of stressful situations. Factor analyses showed that there are several distinct and meaningful dimensions of stressful situations. Situations may vary along dimensions relating to the degree to which they involve personal disaster and life transition. Situations may also represent types, such as those that involve victimization, lack or loss, physical harm, and challenge. These categories seem to be essentially independent, though it is quite possible that a situation might fall into two or more of them at once.

Results of the present study have several implications for both future research on coping and stress and for interpretation of research already completed. Since stressful situations are defined by several dimensions, and since there are meaningful differences in people's responses to these, stressors should

be evaluated in a compound measure. Specifically, life transition and calamity are distinct dimensions, as suggested by prior research. Moreover, as different types of situations evoked different coping responses, it is likely that different emotional reactions were evoked by the situations. This has implications for research linking stressful situations and psychological disorder. There is less reason to suppose that stress is a non-specific precipitant of distress as suggested in the conventional literature (e.g., Selye's G.A.S.) when different types of stress are shown in this study to have quite different effects. Some research has linked depression with loss, (see Rabkin, 1982), but the general trend of epidemiological research is to consider stress to be a simple rather than a compound factor.

Research linking coping efforts to psychological outcome should also consider the complexity of coping, and specifically, the association between coping and situation characteristics. One practice in research into the effects of coping on outcome during stress is to ask people how they usually cope (see, e.g., Andrews, Tennant, Hewson, & Vaillant, 1978; Miller, Surtees, Kreitman, Ingham, & Sashidharan 1985; Robbins & Tanck, 1978; Schill, Ramanaiah, & O'Laughlin, 1984; and Tanck & Robbins, 1979) But this approach is flawed, if the present results are sound, since there does not seem to be one single and consistent way that people cope. Instead, how people cope will depend to some extent on what problem they face. Thus, studies which have looked at what they thought were predominant coping styles were probably assessing those aspects of coping which are unrelated to situations, which therefore are closely linked to personality, which may in turn be associated with the disorder. Coping which is much more contingent on situation characteristics cannot be assessed by such methods. Another research approach has been to correlate people's coping with a

recent life event (or recent coping without reference to *any* situation) with outcome (e.g., Beckham & Adams, 1984; Billings & Moos, 1984; Foster & Gallagher, 1986; and Parker, Brown & Blignault, 1986). This approach is equally flawed, given, first, that the efficacy or appropriateness of the coping is apt to depend on characteristics of the situation, and second, that such characteristics are not assessed. Any future invesigation of the relationship between coping and outcome will have to consider coping in its situational context. The question ought to be not "how is coping related to outcome", but "how is *this* sort of coping with *this* type of situation related to outcome." Obviously this is a much more difficult question to deal with, but in the light of the present study seems a more meaningful one.

This issue of the relationship between coping and situations should also inform research into the structure of coping. The present study suggests that there is not one structure, but several, depending on the situation. This might account for the variety of numbers and types of coping factors in factor analyses of coping scales.

Some studies (e.g., those assessing repression/sensitization, or those which define style as the profile of a set of coping efforts -- cf. Folkman & Lazarus, 1980) have looked at coping style, but this style is apt to mean less "how you tend to cope" and more "how you tend to cope *given this or that situation.*" Although the present study did not investigate any sort of complex consistency of this form (ie, the consistency of coping given different situation characteristics), such consistency would be of considerable interest. It could be, for example, that a certain sort of person is consistently deferential to superiors who criticize but is very assertive with peers who criticize. There is a form of consistency here which is not manifest in a simple look at coping with generic

criticism, but which would be an important part of the person's response style.

The present study has answered some questions about the relationship between stress and personality and coping, but it raises others. For example, I did not assess the outcome of the situations or the coping efforts reported, but it would be interesting to know which patterns of responses to the different situation dimensions and types were associated with beneficial outcomes (or, better yet, to trace the pattern of the various consequences over time). If the outcomes of coping acts were assessed, then the question of *appropriateness* of coping could be addressed. It may be that appropriate copers have better health and psychological outcomes following stressful experiences than others, but this can only be discovered using longitudinal research that considers personality, coping and situation factors.

It would also be interesting to know how coping and situations change over time. Because situations and coping were both treated in snapshot, rather than video fashion in this study, I had no way of knowing how coping changed as the situations unfolded. If the study had assessed dynamic characteristics of situations and coping, the relationships between situations and coping could be expressed much more completely.

Because flexibility was shown to moderate the situation-coping relationship, the study also raises the question of which other personality variables are moderators as well. It certainly indicates that personality, stressful situations, and coping have complex interrelationships. As an example of how this might be important, coping has been thought to be a mediator between stressful situations and outcome; as well, some personality traits such as hardiness have been thought to have a mediating role themselves between stress and health outcome.

Now, a personality trait seems to be a mediator between the situation and coping as well. It is less obvious what is mediating what, given such a scenario. Despite the trouble such findings cause, they should not be ignored, because these interactions are probably only a dim reflection of the actual complexity of the real world.

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Appendix A

Coping and Situation Scales

Situation:_____

SITUATION CHARACTERISTICS.

Please put an X in the box which best represents your understanding of the situation.

How much control did you have over the situation's occurrence?

|_____|_____|_____|_____|_____|_____|_____|

total control — moderate — no control at all

How desirable was the situation for you?

|_____|_____|_____|_____|_____|_____|_____|

very desirable — neutral — very undesirable

How much control did you have over the outcome of the situation?

|_____|_____|_____|_____|_____|_____|_____|

no control at all — moderate — total control

How personally meaningful was the situation for you?

|_____|_____|_____|_____|_____|_____|_____|

not at all meaningful — moderately — very meaningful

How much had you been expecting the situation before it occurred?

|_____|_____|_____|_____|_____|_____|_____|

expecting very much — moderately — not at all expecting

How long did the situation last?

|_____|_____|_____|_____|_____|_____|_____|

a few minutes — a few days — months to years

How familiar or novel was the situation to you?

|_____|_____|_____|_____|_____|_____|_____|

very familiar — moderately — very novel

How much did this change your lifestyle, home situation, work, etc?

|_____|_____|_____|_____|_____|_____|_____|

no change at all — moderate — changed very much

Overall, how stressful was this situation for you?

|_____|_____|_____|_____|_____|_____|_____|

very stressful (eg, death of family member) — moderately — not at all stressful (eg, lost a dollar)

Did the situation involve *actual* or *anticipated*:

- danger or misfortune to you? Yes No
- lack or loss? (of a person or thing) Yes No
- something being withheld from you? Yes No
- rejection of you by other(s)? Yes No
- aggression by others? Yes No
- dominance by others? Yes No
- coercion by others? Yes No
- deception? Yes No
- illness? Yes No
- personal failure? Yes No
- added responsibility or work? Yes No
- physical discomfort? Yes No
- challenge/opportunity? Yes No
- Other (specify) _____ Yes No

In your view, what was it about the situation that made it stressful for you?

YOUR REACTION

To what extent did you react the following ways to the event at the time?

Took direct action to change the situation myself.

|____|____|____|____|____|____|____|

Very much moderately not at all

Thought about how I could solve the problem.

|____|____|____|____|____|____|____|

not at all moderately Very much

Depended on advice from others.

|____|____|____|____|____|____|____|

Very much moderately not at all

Changed my behaviour or lifestyle to adjust to the situation.

|____|____|____|____|____|____|____|

not at all moderately Very much

Changed my attitudes or priorities in view of the circumstances.

|____|____|____|____|____|____|____|

Very much moderately not at all

Avoided thinking about the situation.

|____|____|____|____|____|____|____|

not at all moderately Very much

Distracted myself with some activity (eg, TV, reading, eating, drinking).

|____|____|____|____|____|____|____|

Very much moderately not at all

Wished that the situation were different.

|____|____|____|____|____|____|____|

not at all moderately Very much

Expressed my feelings or thoughts to a confidante.

|____|____|____|____|____|____|____|

Very much moderately not at all

Felt sorry for what I had done.

|____|____|____|____|____|____|____|

not at all moderately Very much

Took care of myself (eg, relaxation, know my limits, keep good feelings about self).

|____|____|____|____|____|____|____|

Very much moderately not at all

Maintained my relationships with others to prevent future conflict.

|____|____|____|____|____|____|____|

not at all moderately Very much

Sought or found spiritual comfort or support.

|____|____|____|____|____|____|____|

Very much moderately not at all

Accepted the fact that suffering and problems are unavoidable.

|____|____|____|____|____|____|____|

not at all moderately Very much

Believed that there is meaning and purpose in the things that happen to me.

|____|____|____|____|____|____|____|

Very much moderately not at all

Had others help me out of the situation.

|____|____|____|____|____|____|____|

not at all moderately Very much

Wished that something fantastic would happen.

|____|____|____|____|____|____|____|

Very much moderately not at all

Released my pent up emotions.

|____|____|____|____|____|____|____|

not at all moderately Very much

Blamed myself.

|____|____|____|____|____|____|____|

Very much moderately not at all

Followed religious principles.

|____|____|____|____|____|____|____|

not at all moderately Very much

Other: _____

|____|____|____|____|____|____|____|

not at all moderately Very much

Is there anything else about your reaction which is relevant or might be important?

Appendix B

Multitrait–multimethod matrices
for Coping Scale

Appendix B.

Multimethod-multitrait matrices, comparing the short Coping Scale with the original Wong & Reker coping scale.

Key:

int = internal control	ext = external control
sec = secondary control	deny = avoidance/denial
wish = wishful thinking	tell = emotional expression
blame = self blame	prev = preventative coping
relig = religious coping	exist = existential coping
W&R = Wong & Reker coping scale	CS = revised Coping Scale.

Coping Scale

		int	ext	sec	deny	wish	tell	blame	prev	relig	exist
	int	.48*	.17	.52	-.01	.12	.18	-.09	.23	-.04	.12
	ext	.13	.69*	.07	-.02	.19	.27	.11	.07	.11	.11
W	sec	.12	.35	.23*	.20	.09	.09	-.08	.16	.18	.01
&	deny	-.21	.04	.08	.61*	.02	-.12	.04	.10	-.06	.04
R	wish	.04	.17	.12	.25	.66*	.05	.36	-.27	.04	-.01
	tell	.30	.34	.18	-.18	.23	.50*	.10	.17	.13	.31
	blame	-.04	.15	.03	.30	.36	.01	.66*	-.13	.15	.14
	prev	.35	.41	.19	.09	-.09	.16	-.34	.44*	.02	.33
	relig	.08	.09	.13	.23	-.12	-.28	.09	.01	.73*	.25
	exist	.12	.17	.20	.24	-.06	.08	-.13	.42	.34	.48*

* Diagonal values represent monotrait-multimethod (validity) values; off-diagonals are multitrait-multimethod values.

Coping Scale \ W&R

		int	ext	sec	deny	wish	tell	blame	prev	relig	exist
	int	.53*	.19	.40	.19	.20	.18	.04	.19	.15	.16
	ext	.17	.71*	.16	.07	.35	.32	.11	.21	.24	.25
W	sec	.27	.19	.58*	.10	.14	-.03	.15	.24	.15	.22
&	deny	.08	.10	.30	.60*	.20	-.35	.15	.20	.16	.08
R	wish	.12	.19	.02	.21	.63*	.21	.50	-.13	.11	.08
\	tell	.20	.42	.08	-.09	.10	.67*	.02	.07	-.04	.10
C	blame	-.02	.26	.00	.25	.45	.09	.79*	-.03	.30	-.02
S	prev	.55	.28	.44	.20	-.11	.21	-.10	.43*	.10	.21
	relig	-.01	.10	.10	.05	.05	.14	.08	.06	.85*	.21
	exist	.13	.14	.30	.28	.00	.19	.16	.52	.42	.87*

*Diagonal values are test-retest correlations (monotrait-momomethod) for the short Coping Scale. Lower off-diagonals are heterotrait-monomethod values, using the Wong & Reker scale, while upper off-diagonals are heterotrait-monomethod values using the Coping Scale.

Appendix C

Correlation matrices

CORRELATION MATRIX: Situation 1 data

		soc	flex	des	loc	sex	age	start1	des1	end1	mean1
		2	3	4	5	6	7	8	9	10	11
soc	2	1.0000									
flex	3	0.0612	1.0000								
des	4	0.1126	0.0549	1.0000							
loc	5	0.2429	-0.0248	0.0463	1.0000						
sex	6	-0.0127	-0.0713	-0.0469	-0.0105	1.0000					
age	7	0.0604	-0.0105	-0.0205	0.2432	-0.1446	1.0000				
start1	8	-0.0094	-0.0347	-0.0319	0.0101	-0.1686	0.0371	1.0000			
des1	9	-0.0409	-0.0112	0.0912	-0.0023	-0.1423	-0.0564	0.5371	1.0000		
end1	10	0.0396	0.0072	0.0225	0.0745	0.0628	-0.0498	-0.3612	-0.1834	1.0000	
mean1	11	0.1747	0.0403	-0.0323	0.0630	-0.2180	0.0982	0.0882	0.0210	0.0033	1.0000
expect1	12	0.0724	-0.0042	-0.0858	0.1419	-0.0393	0.0618	0.3350	0.3480	-0.2098	0.0652
time1	13	0.1763	0.1184	0.1013	0.1364	-0.1294	0.1108	0.0022	-0.0607	0.0839	0.2633
novel1	14	0.0517	-0.0456	-0.0066	0.1432	-0.1416	0.0697	0.0239	-0.0007	-0.0066	0.1348
reject1	20	-0.0303	-0.0411	0.1128	-0.0517	-0.1480	-0.0324	0.0884	0.1630	-0.0463	-0.1418
agg1	21	-0.0062	0.0927	0.0621	-0.0078	-0.0045	-0.0453	0.0940	0.0187	-0.1460	0.0118
dom1	22	0.0014	0.0911	-0.0001	0.0666	0.1078	-0.0868	-0.1329	-0.0472	0.0775	-0.0651
coer1	23	-0.0927	0.0522	0.0889	0.0849	0.0084	-0.1583	0.0381	0.0652	-0.0100	0.0102
dec1	24	-0.0046	-0.0182	-0.0086	0.1342	0.0650	-0.0596	-0.1170	-0.1264	-0.0011	-0.1615
ill1	25	-0.0754	0.0299	0.0560	0.0190	0.0026	-0.1080	-0.1876	-0.1944	0.0893	-0.2071
fail1	26	0.0624	-0.0155	-0.0208	0.0826	0.0163	0.1365	0.0841	-0.0349	-0.0406	-0.1968
work1	27	0.0320	0.0722	-0.0112	0.0370	-0.0460	-0.0361	0.1854	0.0284	-0.0940	0.0758
phys1	28	-0.0511	0.0785	0.0673	0.0137	-0.1275	-0.0462	-0.0901	-0.2097	0.0123	0.0649
chal1	29	0.0203	0.0024	0.0036	-0.0117	-0.0914	-0.0011	0.2945	0.2962	-0.1816	-0.0768
int1	30	0.1225	-0.0566	0.0363	0.0562	0.1331	0.1230	-0.2469	-0.0749	0.2260	0.1306
ext1	31	0.0470	0.0549	0.0027	-0.0952	0.0309	0.0602	0.0816	-0.0301	-0.1042	0.0878
sec1	32	0.0545	-0.0328	-0.0114	0.1035	0.0189	0.0237	-0.0783	-0.0485	0.0283	0.1194
deny1	33	-0.0304	-0.0256	-0.0796	-0.0679	-0.1007	-0.0028	0.0538	0.1485	-0.1196	0.1023
wish1	34	-0.0003	-0.0893	-0.1603	-0.2073	-0.0839	-0.1318	0.2226	0.3048	-0.1021	0.1406
tell1	35	0.1480	0.0637	-0.2026	0.0467	-0.1204	0.0738	0.1052	0.0147	0.0838	0.1426
sblame1	36	0.0629	0.0515	0.0366	0.0499	0.0309	0.1383	0.2286	-0.0366	-0.0560	-0.0155
prev1	37	0.2279	-0.0029	0.0694	0.0973	-0.0441	0.1115	-0.0958	-0.1528	0.2010	0.0497
relig1	38	0.0317	0.1344	-0.0147	-0.0196	-0.0042	-0.0863	-0.0187	0.0202	0.0403	-0.0563
exist1	39	0.0073	0.0102	-0.0125	0.0362	-0.0793	0.0553	-0.1344	-0.1835	0.0397	0.0470
Standard Deviation		4.75	3.92	1.59	3.94	0.46	7.38	2.19	2.20	1.98	1.78

		expect1	time1	novel1	change1	stress1	dang1	lack1	with1	reject1	agg1
		12	13	14	15	16	17	18	19	20	21
expect1	12	1.0000									
time1	13	-0.0494	1.0000								
novel1	14	0.3372	0.2326	1.0000							
change1	15	-0.0145	0.3113	0.1811	1.0000						
stress1	16	0.1307	0.2524	0.0986	0.3996	1.0000					
dang1	17	-0.3359	0.0324	-0.1504	-0.1335	-0.3044	1.0000				
lack1	18	-0.1401	-0.1108	-0.0623	-0.1863	-0.3030	0.3290	1.0000			
with1	19	0.0141	-0.1049	-0.0400	0.0164	-0.1198	0.1569	0.2422	1.0000		
reject1	20	-0.0143	-0.0289	-0.0264	-0.0879	-0.1266	0.1441	0.1583	0.2126	1.0000	
agg1	21	0.0195	0.0799	-0.0976	-0.1174	-0.2069	0.2527	0.1480	0.1787	0.3499	1.0000
dom1	22	-0.0187	-0.0091	-0.0356	-0.0435	-0.1062	0.1281	0.0576	0.1869	0.1952	0.3027
coer1	23	0.0777	0.0480	0.1187	-0.1165	-0.0280	0.1367	0.0734	0.1482	0.2598	0.3124
dec1	24	-0.1752	-0.0464	-0.0755	-0.0561	-0.2365	0.2963	0.2964	0.2508	0.2207	0.2452
ill1	25	-0.3387	-0.0818	-0.1738	-0.1237	-0.2559	0.3213	0.1769	0.0194	-0.0066	0.0387
fail1	26	0.0358	-0.0229	-0.0388	-0.0893	-0.1768	0.1191	0.0026	0.2078	0.3446	-0.0113
work1	27	0.1628	-0.0756	-0.0168	-0.1528	0.0083	-0.0647	-0.0575	-0.0480	-0.1167	-0.0198
phys1	28	-0.0468	-0.0001	0.0578	-0.0734	-0.2177	0.2723	0.1443	0.1083	-0.0248	0.1526
chal1	29	0.2460	-0.0305	0.0959	-0.1800	0.0939	-0.0756	-0.1207	0.0563	0.0960	0.0037
int1	30	0.0153	0.0849	0.0468	0.2395	0.1824	-0.1118	-0.1563	-0.0919	-0.1256	-0.1830
ext1	31	0.1164	0.0884	0.0294	0.2726	0.3183	-0.2316	-0.1545	0.0075	-0.0915	-0.0742
sec1	32	-0.0279	0.2039	-0.0000	0.4661	0.2058	-0.0114	-0.1262	0.0298	-0.0728	-0.0501
deny1	33	0.0083	0.0228	0.0864	0.0363	0.1561	-0.0712	-0.0312	-0.0438	-0.0050	-0.0865
wish1	34	0.1129	0.0822	-0.0629	0.0445	0.3547	-0.0767	-0.1600	-0.0924	0.0102	-0.0183
tell1	35	0.1504	0.0918	0.0612	0.2202	0.1656	-0.2056	-0.1876	-0.1229	-0.0975	-0.1859
sblame1	36	0.0158	0.0632	0.0418	-0.1196	-0.1367	0.1644	-0.0379	0.0049	0.1737	0.0959
prev1	37	-0.0249	0.0909	0.0448	0.0306	-0.0972	0.0265	-0.0365	0.1227	0.1026	0.0096
relig1	38	-0.0451	0.0267	0.0415	-0.1385	-0.0572	0.0982	0.1092	0.1172	0.0725	-0.0151
exist1	39	-0.1394	-0.0418	0.0359	0.1888	0.0227	0.0303	-0.0166	-0.0239	-0.0762	0.0298
Standard Deviation		2.14	1.63	2.01	1.82	1.52	0.46	0.50	0.49	0.46	0.39

		dom1	coer1	dec1	ill1	fail1	work1	phys1	cha11	int1	ext1
		22	23	24	25	26	27	28	29	30	31
dom1	22	1.0000									
coer1	23	0.4697	1.0000								
dec1	24	0.1781	0.2422	1.0000							
ill1	25	-0.0835	0.0112	0.0279	1.0000						
fail1	26	0.1935	0.1317	0.0727	-0.0700	1.0000					
work1	27	0.0193	-0.0017	-0.0222	-0.0567	0.1451	1.0000				
phys1	28	0.0272	0.1060	0.0475	0.2986	0.0618	-0.0338	1.0000			
cha11	29	0.1029	0.1025	-0.0849	-0.1454	0.1871	0.3203	-0.1178	1.0000		
int1	30	-0.0462	-0.0817	-0.1165	0.0516	-0.1479	-0.0616	-0.0165	-0.1736	1.0000	
ext1	31	-0.1189	-0.1783	-0.0196	-0.1781	-0.0630	-0.0232	-0.0781	-0.0452	0.1492	1.0000
sec1	32	-0.0536	0.0116	0.0374	-0.1404	-0.0335	-0.1955	-0.0507	-0.2595	0.1664	0.1323
deny1	33	-0.0597	-0.0845	-0.0458	-0.1275	-0.1598	0.0365	-0.1806	0.2309	-0.1472	0.0296
wish1	34	-0.0116	-0.0256	-0.2180	-0.0496	-0.1773	-0.0046	-0.1394	0.1607	-0.0133	0.1940
tell1	35	-0.0953	-0.1671	-0.1531	-0.0696	0.0033	0.0751	-0.0875	0.0156	0.0943	0.3913
sblame1	36	0.1456	0.1145	0.1289	0.0503	0.4394	0.0879	0.1506	0.0382	-0.1253	-0.0622
prev1	37	0.0548	-0.0134	0.0655	0.0416	0.1246	0.0917	0.0386	0.0855	0.0323	0.0529
relig1	38	0.1124	0.0655	0.0354	0.1595	0.1404	-0.0147	0.0747	0.0981	0.0020	-0.2402
exist1	39	-0.0045	-0.0761	0.0721	0.0187	-0.1173	-0.0542	-0.0536	-0.1613	0.0653	0.2062
Standard Deviation		0.44	0.38	0.39	0.37	0.48	0.50	0.46	0.50	3.15	3.19

		sec1	deny1	wish1	tell1	sblame1	prev1	relig1	exist1
		32	33	34	35	36	37	38	39
sec1	32	1.0000							
deny1	33	-0.0090	1.0000						
wish1	34	-0.0230	0.1153	1.0000					
tell1	35	0.0620	-0.0682	0.2217	1.0000				
sblame1	36	-0.1782	-0.1275	-0.1975	-0.0182	1.0000			
prev1	37	-0.0223	0.0895	-0.1224	0.2139	0.1902	1.0000		
relig1	38	-0.1605	-0.0190	0.0298	-0.2298	0.1669	-0.0296	1.0000	
exist1	39	0.1655	0.0613	-0.0393	0.1204	0.0178	0.1508	-0.2724	1.0000
Standard Deviation		2.99	3.10	3.12	3.12	3.24	2.59	3.50	3.69

CORRELATION MATRIX: Situation 2 data

		soc	flex	des	loc	sex	age	start2	des2	end2	mean2
		2	3	4	5	6	7	8	9	10	11
soc	2	1.0000									
flex	3	0.0425	1.0000								
des	4	0.0776	0.0749	1.0000							
loc	5	0.2509	-0.0140	0.0479	1.0000						
sex	6	-0.0101	-0.1193	-0.0397	-0.0300	1.0000					
age	7	0.0403	0.0207	-0.0631	0.2563	-0.1269	1.0000				
start2	8	-0.0901	0.1014	0.0120	-0.0774	-0.1559	0.1009	1.0000			
des2	9	-0.0619	0.0640	0.0756	-0.0098	-0.0897	-0.0880	0.3263	1.0000		
end2	10	0.0794	0.0543	0.0478	0.1596	0.0993	-0.1084	-0.5881	-0.1924	1.0000	
mean2	11	0.0163	0.0238	-0.1412	0.0261	-0.0195	0.0218	-0.0110	-0.0424	-0.0444	1.0000
expect2	12	-0.0224	-0.0179	0.0845	-0.0557	-0.0997	0.0731	0.2420	0.3125	-0.3377	0.0419
time2	13	0.0045	0.0089	-0.0498	0.0235	-0.1551	0.0395	-0.0289	-0.0427	0.0557	0.2175
novel2	14	-0.0188	-0.0247	0.0286	0.0378	-0.0762	0.0005	0.1194	0.0288	-0.2353	0.1734
change2	15	-0.0015	0.0671	-0.0964	0.0089	-0.0849	0.1467	-0.1045	-0.0990	0.1436	0.1795
stress2	16	-0.0609	-0.0477	-0.0901	-0.1527	-0.1347	-0.0096	0.0402	0.2854	-0.0971	0.1425
dang2	17	-0.0017	-0.0149	0.0130	0.0707	0.0074	-0.0243	-0.0833	-0.1926	0.0986	-0.0473
lack2	18	-0.0616	-0.0575	0.1051	-0.0721	0.1139	-0.1191	-0.1953	-0.1517	0.1649	-0.0872
with2	19	-0.0132	0.0857	0.0501	-0.0205	-0.0659	-0.0234	-0.0411	-0.0914	0.0512	-0.0597
reject2	20	0.0361	0.0821	0.1983	0.0894	-0.0600	-0.0514	0.0383	-0.0111	-0.0446	-0.0662
agg2	21	0.0786	0.0391	0.0266	-0.0052	-0.0295	0.0311	-0.0420	-0.1330	-0.0577	-0.0224
dom2	22	-0.0123	-0.1063	-0.0035	0.0162	0.0879	0.0100	0.0125	-0.0065	0.0083	-0.0804
coer2	23	0.0230	0.0397	0.0083	0.1493	0.0072	0.0782	-0.0258	0.0673	-0.0179	-0.1367
dec2	24	0.1761	-0.0532	0.0304	0.0878	-0.0381	-0.0169	-0.0139	-0.0301	0.0505	-0.0024
ill2	25	0.0206	-0.0399	0.0084	-0.0141	0.0856	-0.1110	-0.2136	-0.1872	0.1810	-0.0305
fail2	26	0.1017	-0.0946	0.1342	0.0671	-0.0855	0.1755	0.1866	-0.0745	-0.1487	-0.0059
work2	27	-0.0584	0.0048	0.0460	-0.1362	-0.0882	-0.0089	0.1004	0.1357	-0.2053	-0.0716
phys2	28	-0.0366	0.0926	0.0985	-0.0015	-0.1606	-0.0120	-0.0178	-0.0925	-0.0038	0.0660
cha12	29	-0.1562	0.0441	0.0520	-0.0906	-0.0008	-0.0077	0.2740	0.2812	-0.2966	-0.1449
int2	30	0.0034	-0.0928	0.0375	0.1015	0.0887	0.0649	-0.3053	0.0177	0.3822	0.0703
ext2	31	0.0946	0.0700	-0.0165	-0.0044	-0.0421	0.1342	-0.0551	-0.0373	0.0008	0.1858
sec2	32	0.0045	0.0534	0.0020	-0.0260	-0.0884	0.0434	-0.1087	-0.0520	0.1615	0.1491
deny2	33	-0.1699	-0.0426	-0.0835	-0.1735	0.1127	0.0079	-0.1208	0.1283	-0.0534	-0.0621
wish2	34	0.0258	-0.0369	-0.1487	-0.1488	-0.1043	-0.0981	0.1913	0.4094	-0.2298	0.1450
tell2	35	0.0969	0.0752	-0.0383	0.0725	-0.1236	0.0640	0.1229	0.1873	-0.1636	0.2147
sblame2	36	0.0339	-0.0439	0.1355	0.0711	-0.0070	0.1271	0.2847	-0.1878	-0.1153	-0.0644
prev2	37	0.1041	0.0077	0.0526	0.0629	0.0298	0.0245	-0.0554	-0.0777	0.0380	0.0756
relig2	38	0.0201	0.1467	0.0160	0.0835	-0.0087	-0.0504	-0.0403	-0.0648	0.0969	0.0013
exist2	39	0.0140	0.1004	-0.0765	0.0038	-0.0930	-0.0467	0.0601	0.0655	-0.0393	0.2067
Standard Deviation		4.75	3.92	1.59	3.94	0.46	7.38	2.23	2.05	2.04	1.67

		expect2	time2	novel2	change2	stress2	dang2	lack2	with2	reject2	agg2
		12	13	14	15	16	17	18	19	20	21
expect2	12	1.0000									
time2	13	-0.1018	1.0000								
novel2	14	0.4572	0.0677	1.0000							
change2	15	-0.0244	0.4104	0.0840	1.0000						
stress2	16	0.1269	0.2415	0.1694	0.1876	1.0000					
dang2	17	-0.2242	0.0508	-0.1369	-0.0327	-0.2231	1.0000				
lack2	18	-0.1894	-0.0918	-0.1352	-0.1515	-0.2570	0.3099	1.0000			
with2	19	-0.0154	-0.0839	0.0507	-0.0934	-0.2103	0.1522	0.2787	1.0000		
reject2	20	-0.0230	0.1256	0.0219	-0.0209	-0.1500	0.1127	0.0377	0.1744	1.0000	
agg2	21	-0.1717	0.0714	-0.1150	-0.0405	-0.0308	0.1788	0.0592	0.0946	0.2411	1.0000
dom2	22	-0.0770	-0.0516	0.0045	-0.0541	-0.0708	0.0508	0.0903	0.1713	0.1093	0.3244
coer2	23	-0.1223	-0.0788	-0.0215	-0.1105	-0.1155	0.0689	0.0097	0.1700	0.1329	0.2756
dec2	24	-0.1895	0.0357	-0.0653	0.0532	-0.0864	0.2225	0.1547	0.1778	0.2225	0.1337
ill2	25	-0.1916	-0.0938	-0.2138	0.0530	-0.1711	0.2547	0.1356	0.1205	0.0208	0.1148
fail2	26	0.0120	0.0632	-0.0016	-0.0474	-0.1653	0.1455	-0.0404	0.0213	0.2487	-0.0008
work2	27	0.1875	-0.2471	-0.0380	-0.2844	-0.0080	-0.1524	-0.1120	0.0279	-0.1104	-0.0417
phys2	28	-0.0496	0.0835	0.0074	-0.0216	-0.1076	0.3073	0.1611	0.2544	0.1026	0.1015
chal2	29	0.2757	-0.2367	0.0604	-0.2352	0.0383	-0.0965	-0.1095	0.0354	-0.0546	-0.0472
int2	30	-0.0325	0.0132	-0.0788	0.2190	0.0355	-0.0145	0.0254	-0.1078	-0.0653	-0.1768
ext2	31	0.0783	0.1007	0.1393	0.1998	0.2716	-0.0819	-0.0876	-0.0802	0.0611	0.0880
sec2	32	0.0037	0.3391	0.0346	0.4620	0.1933	-0.0888	-0.1084	-0.1158	0.0066	-0.1145
deny2	33	0.0555	-0.0185	0.0241	0.0424	0.1604	-0.0839	-0.0456	-0.1377	-0.1507	0.0545
wish2	34	0.2341	0.0777	0.0188	0.0986	0.3026	-0.1801	-0.2194	-0.2150	-0.0450	-0.0372
tell2	35	0.2074	0.1591	0.0723	0.0830	0.2336	-0.0212	-0.1711	-0.1237	0.0334	0.0239
sblame2	36	-0.0423	0.0216	-0.0222	-0.1113	-0.2478	0.2521	0.1365	0.0654	0.2217	0.0821
prev2	37	0.0187	0.0496	0.0119	0.0580	-0.0549	0.0005	-0.0613	0.0484	0.0675	0.0522
relig2	38	-0.0735	0.0370	-0.0472	-0.0410	-0.1519	0.0632	0.0762	0.0708	0.0212	-0.0651
exist2	39	0.0089	0.0179	-0.0583	0.0233	0.1446	-0.0663	-0.1150	0.0088	-0.0781	0.0488
Standard Deviation		2.07	1.70	2.10	1.77	1.43	0.40	0.50	0.47	0.40	.034

		dom2	coer2	dec2	ill2	fail2	work2	phys2	cha12	int2	ext2
		22	23	24	25	26	27	28	29	30	31
dom2	22	1.0000									
coer2	23	0.3088	1.0000								
dec2	24	0.1700	0.2222	1.0000							
ill2	25	-0.0480	0.0981	-0.0635	1.0000						
fail2	26	0.0844	0.0010	0.0870	-0.1168	1.0000					
work2	27	-0.0046	0.0422	-0.0824	-0.0053	0.0866	1.0000				
phys2	28	0.0330	-0.0207	0.0055	0.2445	0.0975	-0.0800	1.0000			
cha12	29	-0.0106	-0.0222	-0.1439	-0.1062	0.1178	0.3762	-0.0135	1.0000		
int2	30	-0.1296	-0.1238	-0.0208	0.1025	-0.2082	-0.1377	-0.0118	-0.2076	1.0000	
ext2	31	0.0171	0.0685	0.0206	-0.0376	0.0581	-0.0982	-0.0930	-0.0551	0.0968	1.0000
sec2	32	-0.0523	-0.0852	0.0626	0.0542	-0.1374	-0.2665	0.0772	-0.3012	0.3042	0.1418
deny2	33	0.0189	0.0257	-0.0530	-0.0935	-0.1874	0.0901	-0.0583	0.1628	0.0200	0.1192
wish2	34	-0.0883	-0.0596	-0.0049	-0.1213	-0.1304	-0.0078	-0.0397	0.1197	0.0512	0.1158
tell2	35	-0.0787	-0.0462	-0.0304	-0.0956	0.0541	-0.0024	-0.0682	0.0794	0.0754	0.4807
sblame2	36	0.0794	0.0255	0.0996	-0.0515	0.4850	-0.0757	0.1601	-0.0288	-0.1883	-0.0685
prev2	37	-0.0079	0.0805	0.0459	0.0479	0.0835	-0.0544	0.0341	-0.0465	0.0961	0.1893
relig2	38	-0.1047	-0.0247	-0.0391	0.1391	0.1079	0.0255	0.0354	0.0131	-0.0121	-0.1301
exist2	39	0.0039	-0.0191	0.0548	-0.0998	-0.0562	-0.0995	0.0589	-0.1157	-0.0248	0.1917
Standard Deviation		0.36	0.33	0.34	0.36	0.47	0.50	0.44	0.50	2.97	3.07

		sec2	deny2	wish2	tell2	sblame2	prev2	relig2	exist2
		32	33	34	35	36	37	38	39
sec2	32	1.0000							
deny2	33	0.0256	1.0000						
wish2	34	0.1028	0.3227	1.0000					
tell2	35	0.1452	0.0635	0.2784	1.0000				
sblame2	36	-0.1724	-0.2699	-0.3174	-0.1243	1.0000			
prev2	37	0.1042	0.0871	-0.0016	0.2096	0.1127	1.0000		
relig2	38	-0.1302	-0.0870	-0.0711	-0.1036	0.0590	0.0145	1.0000	
exist2	39	0.1111	0.0709	0.1321	0.1411	-0.0317	0.1422	-0.2831	1.0000
Standard Deviation		2.90	3.17	3.26	2.85	3.38	2.49	3.51	2.76

CORRELATION MATRIX: Situation 3 data

		soc	flex	des	loc	sex	age	start3	des3	end3	mean3
		2	3	4	5	6	7	8	9	10	11
soc	2	1.0000									
flex	3	0.0620	1.0000								
des	4	0.0740	0.0679	1.0000							
loc	5	0.2617	-0.0250	0.0205	1.0000						
sex	6	-0.0228	-0.1024	-0.0732	-0.0888	1.0000					
age	7	0.0502	-0.0074	-0.0607	0.2890	-0.1152	1.0000				
start3	8	-0.1125	-0.0419	-0.0485	-0.0936	-0.2181	0.0686	1.0000			
des3	9	-0.0530	-0.0092	0.0202	-0.0099	-0.0933	0.0264	0.3756	1.0000		
end3	10	0.1781	0.0262	0.0173	0.0972	0.1074	-0.0652	-0.5415	-0.2760	1.0000	
mean3	11	0.1546	0.0342	-0.0782	0.0867	-0.0848	0.1099	-0.1466	-0.1371	0.1118	1.0000
expect3	12	-0.1329	0.0132	-0.0709	-0.1021	-0.1233	0.0412	0.3581	0.2887	-0.1933	0.0142
time3	13	0.1538	0.0165	-0.0891	0.1110	-0.0523	0.0879	-0.1310	-0.0884	0.0380	0.2674
novel3	14	-0.0303	0.0381	-0.0961	-0.0269	-0.0926	0.0067	0.0692	0.0523	-0.0979	0.1705
change3	15	0.1287	-0.0196	-0.1245	0.0112	-0.0876	0.0139	-0.0832	-0.0025	0.0511	0.2452
stress3	16	0.0343	-0.0655	-0.1716	-0.0048	-0.1404	0.0970	0.0850	0.2505	-0.1840	0.2823
dang3	17	0.0204	0.0178	0.1055	-0.0636	0.0096	-0.1076	-0.0377	-0.0960	0.0470	-0.1014
lack3	18	-0.0468	-0.0075	0.1178	-0.0237	-0.0298	-0.0178	-0.1648	-0.2415	0.1899	-0.1280
with3	19	-0.0155	0.0755	0.0559	-0.0644	-0.0825	-0.1329	-0.1146	-0.2141	0.0986	-0.0181
reject3	20	0.0550	-0.0017	0.0233	-0.1184	0.0249	0.0075	0.0661	-0.0610	0.0433	-0.0441
agg3	21	0.0044	-0.0097	0.0029	-0.0821	0.0435	-0.0839	-0.0080	-0.1343	0.1431	0.0350
dom3	22	0.0126	0.0765	0.0204	-0.0436	0.0024	-0.1452	-0.0975	-0.0634	0.1179	-0.0186
coer3	23	-0.0148	0.1597	0.0516	-0.0699	0.0000	-0.0854	-0.0558	-0.1315	0.0132	0.0094
dec3	24	0.0291	-0.0572	-0.0656	-0.0467	-0.0873	-0.0286	-0.0731	-0.1575	0.1251	0.0253
ill3	25	0.0761	-0.0293	0.1479	0.0741	0.1270	-0.1363	-0.1987	-0.1971	0.1003	0.0017
fail3	26	0.0233	-0.0074	0.1568	-0.0202	0.0276	0.0427	0.1917	-0.0593	-0.2019	-0.1196
work3	27	-0.0487	0.0977	0.0309	0.0256	-0.0230	-0.0649	0.1909	0.2120	-0.2816	-0.0756
phys3	28	0.0852	0.1974	0.1168	-0.0307	-0.0204	-0.1272	-0.1337	-0.2261	0.1258	0.0122
cha13	29	-0.1431	0.0444	0.0754	-0.1347	-0.0894	-0.1800	0.2911	0.3140	-0.2939	-0.1788
int3	30	0.0428	0.0270	-0.0033	0.2015	-0.0706	0.2379	-0.1186	0.1411	0.2111	0.1343
ext3	31	0.1344	-0.0991	-0.0862	0.0429	-0.0178	0.1451	0.1521	0.0655	-0.0753	0.1546
sec3	32	0.0695	0.0433	-0.1464	-0.0100	0.0141	0.0238	-0.0659	0.0463	0.0787	0.2513
deny3	33	-0.1322	-0.0754	-0.0509	-0.1182	-0.0150	-0.1524	-0.0519	0.1095	-0.0304	0.0140
wish3	34	-0.1371	-0.0742	-0.1229	-0.1425	-0.1110	-0.0795	0.0828	0.3992	-0.1461	0.0534
tell3	35	0.1843	0.0570	-0.1173	0.0453	-0.0794	0.1073	0.2109	0.2373	-0.1475	0.1323
sblame3	36	0.1304	0.0086	0.1024	0.0419	-0.0298	0.0900	0.3844	-0.0839	-0.1584	-0.0294
prev3	37	0.2607	0.0247	0.0140	0.0998	-0.0142	0.0612	0.0129	0.0544	0.1620	0.2499
relig3	38	0.0076	0.1290	0.0450	-0.0061	-0.0027	-0.0628	-0.1351	-0.0163	0.0881	-0.1151
exist3	39	-0.0197	0.1002	-0.0318	-0.0304	-0.0579	-0.0073	0.0149	-0.1017	-0.0646	0.0825
Standard Deviation		4.75	3.92	1.59	3.94	0.46	7.38	2.23	2.03	2.02	1.67

		expect3	time3	novel3	change3	stress3	dang3	lack3	with3	reject3	agg3
		12	13	14	15	16	17	18	19	20	21
expect3	12	1.0000									
time3	13	-0.0648	1.0000								
novel3	14	0.2347	-0.0051	1.0000							
change3	15	-0.0326	0.3876	0.2278	1.0000						
stress3	16	-0.0111	0.2326	0.1615	0.3936	1.0000					
dang3	17	-0.0673	0.0280	-0.1705	-0.1008	-0.1835	1.0000				
lack3	18	-0.1051	-0.0626	-0.1350	-0.2160	-0.2386	0.2444	1.0000			
with3	19	0.0087	-0.1129	0.0296	-0.1329	-0.1630	0.2184	0.3749	1.0000		
reject3	20	0.0275	-0.1038	0.0691	-0.0447	-0.1537	0.1398	0.1411	0.1784	1.0000	
agg3	21	-0.0338	0.0879	-0.0853	0.0553	-0.1175	0.2262	0.0525	0.2012	0.3468	1.0000
dom3	22	-0.0195	0.0648	-0.0060	-0.0033	-0.1278	0.1274	-0.0318	0.1132	0.2233	0.4528
coer3	23	-0.0858	0.0524	-0.0382	-0.0216	-0.1006	0.1429	0.0446	0.0300	0.1278	0.3435
dec3	24	-0.0188	-0.0105	0.0149	-0.1024	-0.0809	0.3031	0.0973	0.3052	0.2788	0.2837
ill3	25	-0.2573	-0.0779	-0.1434	-0.1567	-0.1242	0.1658	0.0702	0.1868	-0.0098	0.0261
fail3	26	0.0219	-0.1266	0.0529	-0.0449	-0.1419	0.0826	-0.0562	0.1452	0.2353	-0.0694
work3	27	0.0543	-0.1385	0.0008	-0.2475	-0.0487	-0.0990	-0.1307	-0.0383	-0.0612	-0.1431
phys3	28	-0.0931	0.0620	-0.0760	-0.2205	-0.1771	0.2654	0.1827	0.2431	0.1476	0.0925
cha13	29	0.1143	-0.1475	0.0168	-0.0877	-0.0287	-0.0461	-0.0708	0.0791	-0.0165	-0.0175
int3	30	0.0244	0.0245	-0.0285	0.0719	0.1509	-0.0708	-0.0092	-0.1422	-0.1616	-0.0865
ext3	31	0.0230	-0.0153	0.0794	0.2405	0.2559	-0.1410	-0.1253	-0.1909	-0.0078	-0.0417
sec3	32	-0.0352	0.1978	0.1634	0.5669	0.2424	-0.0677	-0.1512	-0.2189	0.0910	-0.0257
deny3	33	0.0137	-0.0474	0.0263	0.1255	0.1468	0.0022	-0.1284	-0.0128	-0.1321	-0.0681
wish3	34	0.0957	0.0449	-0.1044	0.1127	0.2352	-0.1374	-0.2705	-0.1967	-0.0280	0.0349
tell3	35	0.0077	0.1588	0.0513	0.2446	0.2876	0.0093	-0.1030	-0.1648	-0.0753	-0.0577
sblame3	36	0.0621	0.0188	0.0479	-0.0229	-0.1425	0.0310	0.0139	0.0852	0.1931	0.0838
prev3	37	-0.0626	0.0234	0.0546	0.0662	-0.0357	-0.0277	-0.0097	0.0863	0.0438	-0.0435
relig3	38	0.0286	-0.0355	0.0099	-0.0212	-0.0363	0.1430	0.1198	0.1763	0.1369	0.0028
exist3	39	0.0645	-0.0009	0.0480	0.1179	0.0891	-0.1053	-0.0228	-0.0157	-0.0195	-0.1272
Standard Deviation		1.99	1.66	2.02	1.96	1.34	0.41	0.50	0.48	0.44	0.36

		dom3	coer3	dec3	ill3	fail3	work3	phys3	chal3	int3	ext3
		22	23	24	25	26	27	28	29	30	31
dom3	22	1.0000									
coer3	23	0.4715	1.0000								
dec3	24	0.2137	0.1904	1.0000							
ill3	25	-0.0318	0.1691	-0.0131	1.0000						
fail3	26	0.1383	-0.0476	-0.0188	0.0765	1.0000					
work3	27	-0.0821	-0.1532	-0.0730	-0.0507	0.0868	1.0000				
phys3	28	0.1221	0.2487	0.0679	0.3991	0.0578	-0.0251	1.0000			
chal3	29	0.0318	-0.0446	-0.0177	-0.0702	0.1730	0.4232	-0.0581	1.0000		
int3	30	-0.0676	-0.0629	-0.1849	0.0235	-0.1901	-0.1232	0.0116	-0.0379	1.0000	
ext3	31	0.0352	0.0588	-0.0232	-0.1337	-0.0491	-0.0838	-0.1646	-0.0427	0.1471	1.0000
sec3	32	-0.0617	-0.0155	-0.0943	-0.1373	-0.1235	-0.1825	-0.1005	-0.0999	0.2114	0.1976
deny3	33	0.0138	-0.0229	-0.0308	-0.0203	-0.2136	-0.0223	-0.1656	0.0121	-0.0184	0.0806
wish3	34	0.0297	0.0448	-0.0633	-0.1404	-0.1752	0.0999	-0.1789	0.1052	0.1958	0.0811
tell3	35	-0.0456	-0.1304	-0.0810	-0.1374	-0.0818	-0.0259	-0.1010	0.0584	0.2200	0.4866
sblame3	36	0.0582	0.0006	-0.0493	-0.0307	0.3766	0.0126	0.0877	0.0906	-0.2328	-0.0278
prev3	37	-0.0445	-0.0789	-0.0052	0.1227	0.0302	0.0858	0.1054	-0.0843	0.0857	0.1683
relig3	38	0.0697	0.0255	-0.0595	0.0748	0.1949	0.0325	0.1393	0.0844	0.0333	-0.1634
exist3	39	0.0106	-0.0137	-0.0326	-0.0523	-0.0214	-0.0269	-0.1194	-0.1620	0.0224	0.1894
Standard Deviation		0.41	0.35	0.34	0.32	0.47	0.50	0.44	0.50	3.03	3.24

		sec3	deny3	wish3	tell3	sblame3	prev3	relig3	exist3
		32	33	34	35	36	37	38	39
sec3	32	1.0000							
deny3	33	0.0753	1.0000						
wish3	34	0.1937	0.3273	1.0000					
tell3	35	0.2454	0.0630	0.1240	1.0000				
sblame3	36	-0.1360	-0.2248	-0.3140	-0.0204	1.0000			
prev3	37	0.1261	0.1206	-0.0426	0.3119	0.2131	1.0000		
relig3	38	-0.0637	-0.0633	0.0180	-0.2104	0.0665	-0.0882	1.0000	
exist3	39	0.1163	0.1176	0.0269	0.1155	0.0264	0.1873	-0.2299	1.0000
Standard Deviation		2.90	3.13	3.32	2.90	3.43	2.53	3.47	2.79

Appendix D

Component analyses of situation dimensions and situation types

Appendix D: Component analysis of situation Dimensions and situation Types.

ROTATED FACTOR LOADINGS (PATTERN)

		FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4	FACTOR 5	FACTOR 6	FACTOR 7	FACTOR 8
start	dim	0.796	0.011	0.030	-0.043	-0.192	0.061	0.080	0.133
desire	dim	0.675	0.126	-0.067	-0.304	-0.318	0.049	0.069	-0.133
end	dim	-0.664	0.156	-0.056	-0.027	-0.299	-0.054	0.049	-0.151
meaning	dim	0.063	0.106	0.593	0.028	-0.113	0.070	-0.377	0.250
expect	dim	0.371	0.049	-0.107	-0.224	-0.043	0.708	-0.030	0.144
time	dim	-0.068	0.113	0.714	0.153	-0.142	0.069	0.085	-0.080
novelty	dim	-0.075	0.022	0.228	0.061	-0.040	0.814	0.036	-0.066
change	dim	-0.096	-0.211	0.698	-0.201	0.118	0.070	0.019	-0.222
stress	dim	0.276	-0.104	0.591	-0.380	-0.195	-0.001	-0.117	0.011
danger	type	-0.056	0.168	0.016	0.585	0.292	-0.342	0.129	-0.006
lack	type	-0.122	0.004	-0.305	0.250	0.583	-0.004	-0.044	-0.123
with	type	-0.026	0.096	0.012	-0.019	0.668	0.068	0.229	0.027
reject	type	0.255	0.365	-0.064	0.016	0.204	-0.073	0.532	-0.349
aggres	type	0.297	0.600	0.003	0.255	0.286	-0.110	-0.122	-0.077
domin	type	-0.228	0.745	-0.021	-0.138	0.110	-0.035	0.151	0.117
coerc	type	0.023	0.784	0.005	0.077	0.057	0.140	0.072	-0.011
decept	type	-0.048	0.282	-0.078	0.015	0.621	-0.186	-0.002	-0.066
illness	type	-0.109	-0.093	-0.201	0.636	-0.109	-0.290	0.006	-0.154
fail	type	-0.018	0.048	-0.023	0.053	0.107	0.014	0.851	0.193
work	type	0.088	-0.005	-0.063	-0.013	-0.021	-0.015	0.045	0.853
physic	type	-0.049	0.054	0.022	0.761	0.069	0.210	-0.042	0.046
chall	type	0.325	0.125	-0.109	-0.134	-0.132	0.141	0.368	0.461
VP		2.123	1.933	1.931	1.858	1.757	1.530	1.439	1.365

THE VP FOR EACH FACTOR IS THE SUM OF THE SQUARES OF THE ELEMENTS OF THE COLUMN OF THE FACTOR PATTERN MATRIX CORRESPONDING TO THAT FACTOR. WHEN THE ROTATION IS ORTHOGONAL, THE VP IS THE VARIANCE EXPLAINED BY THE FACTOR.

SORTED ROTATED FACTOR LOADINGS (PATTERN)

		FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4	FACTOR 5	FACTOR 6	FACTOR 7	FACTOR 8
start	dim	0.796	0.0	0.0	0.0	0.0	0.0	0.0	0.0
desire	dim	0.675	0.0	0.0	-0.304	-0.318	0.0	0.0	0.0
end	dim	-0.664	0.0	0.0	0.0	-0.299	0.0	0.0	0.0
coerc	type	0.0	0.784	0.0	0.0	0.0	0.0	0.0	0.0
domin	type	0.0	0.745	0.0	0.0	0.0	0.0	0.0	0.0
aggres	type	0.297	0.600	0.0	0.255	0.286	0.0	0.0	0.0
time	dim	0.0	0.0	0.714	0.0	0.0	0.0	0.0	0.0
change	dim	0.0	0.0	0.698	0.0	0.0	0.0	0.0	0.0
meaning	dim	0.0	0.0	0.593	0.0	0.0	0.0	-0.377	0.0
stress	dim	0.276	0.0	0.591	-0.380	0.0	0.0	0.0	0.0
physic	type	0.0	0.0	0.0	0.761	0.0	0.0	0.0	0.0
ill	type	0.0	0.0	0.0	0.636	0.0	-0.290	0.0	0.0
danger	type	0.0	0.0	0.0	0.585	0.292	-0.342	0.0	0.0
with	type	0.0	0.0	0.0	0.0	0.668	0.0	0.0	0.0
decept	type	0.0	0.282	0.0	0.0	0.621	0.0	0.0	0.0
lack	type	0.0	0.0	-0.305	0.250	0.583	0.0	0.0	0.0
novelty	dim	0.0	0.0	0.0	0.0	0.0	0.814	0.0	0.0
expect	dim	0.371	0.0	0.0	0.0	0.0	0.708	0.0	0.0
fail	type	0.0	0.0	0.0	0.0	0.0	0.0	0.851	0.0
reject	type	0.255	0.365	0.0	0.0	0.0	0.0	0.532	-0.349
work	type	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.853
chall	type	0.325	0.0	0.0	0.0	0.0	0.0	0.368	0.461
VP		2.123	1.933	1.931	1.858	1.757	1.530	1.439	1.365

THE ABOVE FACTOR LOADING MATRIX HAS BEEN REARRANGED SO THAT THE COLUMNS APPEAR IN DECREASING ORDER OF VARIANCE EXPLAINED BY FACTORS. THE ROWS HAVE BEEN REARRANGED SO THAT FOR EACH SUCCESSIVE FACTOR, LOADINGS GREATER THAN 0.5000 APPEAR FIRST. LOADINGS LESS THAN 0.2500 HAVE BEEN REPLACED BY ZERO.