# CROSS-SITUATIONAL CONSISTENCY IN ATTRIBUTIONS ABOUT THE

# CAUSES OF OTHERS' MISFORTUNES: A CRITICAL EVALUATION OF

# ATTRIBUTIONAL STYLE

by

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Cross-Situational Consistency in Attributions About the Causes of

Others' Misfortunes:  A Critical Evaluation of Attributional Style

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# ABSTRACT

"Attributional style" is a relatively new concept in psychology. It has been defined as cross-situational consistency in causal attributions about a specific class of events. Although examined exclusively in the domain of self-perception, the attributional style construct may be applicable to human perception more generally. The present thesis directly questioned whether attributional style pertains to person perception, by defining and critically evaluating the concept, "controllability attributional style for others' misfortunes", as operationalized by a new measure developed for this investigation. "Controllability attributional style" was focused upon because "controllability" has been shown to be a predominant dimension in people's causal thinking about others' misfortunes. Three studies are reported in which a new measure was iteratively developed, its internal characteristics were examined, and external correlates of controllability attributional style were examined. Analyses indicated only slight evidence of a cross-situationally consistent attributional style, and strong evidence of discriminativeness in causal perceptions of others' misfortunes. The results of the present studies raise serious questions about the existence of attributional style in the domain of person perception examined. It was concluded that the lack of broad cross-situational consistency and the strong evidence of discriminativeness in causal attributions about others' misfortunes precludes the notion of a cognitive "style".

# DEDICATION

In Loving Memory Of My Father,

William Robert (Bill) Higgins (1913-1989)

*Tempis Fugit*

# ACKNOWLEDGEMENTS

> *There is a lovely road that runs from Ixopo into the hills. These hills are grass-covered and rolling, and they are lovely beyond any singing of it. The road climbs seven miles into them, to Carisbrooke; and from there, if there is no mist, you look down on one of the fairest valleys of Africa.*
>
> - Alan Paton
> *Cry, The Beloved Country*

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# CHAPTER I

## INTRODUCTION

*Preamble*

A relatively new, individual difference concept has entered the psychological lexicon in recent years. "Attributional style" (AS) has been defined as cross-situational consistency in causal attributions over a specific class of situations (Abramson, Seligman, & Teasdale, 1978; Alloy et al., 1988; Anderson, 1983b; Anderson & Arnoult, 1985a; Anderson, Horowitz, & French, 1983; Metalsky & Abramson, 1981; Peterson & Seligman, 1984; Seligman, 1975; Seligman et al., 1979). Conceptualized as a personal bias to explain certain events/outcomes in a systematic way, attributional style has been described as a "cognitive trait" (Weiner, 1986). As with any new psychological concept, the validity and utility of attributional style has been formally examined in a number of studies (Arntz, Gerlsma, & Albersnagel, 1985; Anderson, Jennings, & Arnoult, 1988; Cutrona, Russell, & Jones, 1985; Sanderman, 1986; Peterson et al. 1982). Not all of the press has been supportive, but, on the whole, there is a growing consensus among attribution researchers that there exist substantial individual differences in people's attributional preferences in a variety of situations - differences which are just beginning to be understood (Ross & Nisbett, 1991; cf. Shrauger & Altrocchi, 1964).

Although the attributional style concept has been examined exclusively in the domain of self-perception, the construct may be applicable to human perception more generally. The research in the present thesis directly addressed the question of whether attributional style pertains to person perception. One area of person perception was examined, i.e., perception of the causes of others' misfortunes. The

decision as to what area of person perception to investigate was guided by the observation that most current research on causal attributions examines "...two domains of social behaviour, each of which involves a pair of potentially causal actors: achievement situations, involving teachers and students, and victimization, involving harmdoers and victims" (Hamilton, 1987, p. 33). I chose to work in the latter area (focusing upon reactions to victims of misfortune) and relied upon the attributional model of helping (Weiner, 1980a, 1980b).

The present thesis defined and elaborated upon a new AS construct, "controllability attributional style for others' misfortunes". Although several AS's for others' misfortunes are possible, controllability AS was focused upon, since "controllability" has already been shown to be a predominant dimension in peoples' causal thinking about others' misfortunes (Weiner, 1986). The goal of the present thesis was to critically evaluate the concept of a "controllability attributional style for others' misfortunes", as operationalized by a new AS measure developed for this investigation. According to Cronbach and Meehl (1955), a construct's validity cannot be determined independently of the test or tests that presumably measure the construct. Therefore, following the literature review and construct definition, I will report a series of studies in which the new attributional style measure was iteratively developed, the test's internal characteristics were examined, and external correlates of controllability attributional style were examined.

## 1.1.0 Causal attributions and altruism

> *The quality of mercy is not strain'd;*
> *It droppeth as the gentle rain from heaven*
> *Upon the place beneath. It is twice blest:*
> *It blesseth him that gives and him that takes.*
> Shakespeare, *The Merchant of Venice*

Despite many normative prescriptions to treat others kindly, people in need of help, and often in desperate need, do not always receive it. Social psychologists have demonstrated that several crucial factors, substantiated in decades of research, determine whether or not a victim of misfortune is likely to receive help from others (e.g., Darley & Latané, 1968; Darley & Batson, 1973). The determinant of helping that has received the most attention in recent years is causal attributions and it is the underlying dimensions of causes, rather than the causes themselves that are thought to influence affect and aid (e.g., Barnes, Ickes, & Kidd, 1979; Berkowitz, 1969; Weiner, 1980a, 1980b). Specifically, if potential aid-givers attribute a victim's problem to causes they think are controllable by the victim, they are likely to feel anger and no pity toward the victim and they are less likely to help. On the other hand, if potential aid-givers attribute a victim's problem to causes they think are uncontrollable by the victim, they are likely to feel sympathy and no anger toward the victim and they are more likely to help (e.g., Ickes & Kidd, 1976; Schmidt & Weiner, 1988; Weiner, 1980a, 1980b; Weiner & Kukla, 1970; Weiner, Russell, & Lerman, 1978, 1979). These central tenets form the basis of an attributional model of helping behaviour, which postulates an "attribution--affect--action motivational sequence, in which thoughts determine what we feel and feelings determine what we do" (Weiner, 1980a, p. 676). The postulated sequence has been substantiated in a series of experimental and correlational studies (e.g., Meyer & Mulherin, 1980; Reisenzein, 1986; see Schmidt & Weiner, 1988 for a review).

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*1.1.1 Attribution theory in social psychology*

Weiner's (1980a, 1980b) helping model rests on one of the most basic assumptions of attribution theory (or rather, theories): that cognitions mediate the links between stimuli (antecedent conditions) and responses (behaviours, affect, experiences) (Försterling & Rudolph, 1988). Attribution theories were formulated within social psychology, a field of enquiry defined as "an attempt to understand and explain how the thought, feeling, and behavior of individuals are influenced by the actual, imagined, or implied presence of others" (Allport, 1968, p. 3), and more recently (and less restrictively) as "the scientific study of the personal and situational factors that affect individual social behavior" (Shaver, 1987, p. 18). At present, social psychological research is broadly committed to understanding social behaviour (a) as a function of how people perceive their world, rather than as a function of objective stimulus conditions, (b) as a function of what people think about what they do, rather than as a function solely of actions or feelings, and (c) as a function of the person as a thinking organism whose thought processes mediate between impinging stimulus information and emitted responses (Fiske and Taylor, 1984; Kelley, 1972; Wicklund and Frey, 1981).

Social psychology examines the causes of social behaviour, i.e., the cognitive and motivational processes that influence the social behaviour of the individual (Shaver, 1987). In social psychology, theoretical explanations of behaviour generally assume that people's responses depend on how the world appears to them. Since people actively select information from their social environments, and construct "final percepts" or representations of the social world (Heider, 1958), understanding people's social perceptions or constructions of social reality is fundamental to

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understanding their actions and reactions toward others (Allport, 1955; Heider, 1958).

Social perception provides individuals with useful data to construct and/or test hypotheses about interpersonal behaviour. However, it has been demonstrated that the data collection process can be compromised by a number of cognitive shortcuts and errors, starting at the stage of gathering information (see Fiske & Taylor, 1984, for a review). For instance, while individuals actively and selectively gather information about themselves and others to construct their percepts of the social world, social data gathering is unsystematic and may be influenced by factors such as an actor's social salience (Eisen & McArthur, 1979; McArthur & Solomon, 1978; Taylor & Fiske, 1975). A good deal of evidence now suggests that social perceptions may be strongly influenced by minimal and sometimes quite subtle available information (e.g., Asch, 1946; Kelley, 1950; Taylor & Fiske, 1975) as well as by implicit personality theories (e.g., Passini & Norman, 1966). Perceivers' implicit theories of personality (i.e., sets of expectations or schemata about what traits go together or about covariation among traits) are cognitive structures, hierarchically organized like other cognitive schemata (Bruner & Tagiuri, 1954; Cantor & Mischel, 1979; Passini & Norman, 1966). Implicit theories of personality enable people to categorize others and situations quickly, oversimplifying the social world (e.g., Bruner, 1957; Jones & Gerard, 1967). People typically are unaware of their implicit personality theories (e.g., Anderson, Lepper, & Ross, 1980).

In addition to being influenced by minimal information and implicit personality theories, social perceptions tend to be more positive than negative (Matlin & Stang, 1978; Sears, 1983), and tend to be more strongly influenced by negative than by positive information (e.g., Anderson, 1965; Fiske, 1980; Hamilton & Zanna, 1974). Finally, people rely heavily on cognitive (judgemental) heuristics or

shortcuts that may systematically bias the data (Kahneman & Tversky, 1973; Tversky & Kahneman, 1974). Recent evidence suggests that as little cognitive effort as possible is expended in understanding the self and others (e.g., Sherman & Corty, 1984). Indeed, a prominent feature of self and person perception is the rapidity with which judgements are made and impressions formed (Sherman & Corty, 1984; see Fiske & Taylor, 1984 for a review).

However, people do not just observe and categorize others. They seek explanations for actions and try to predict future actions. The search for the causes of behaviour relies on attribution processes which are spontaneous, quick, often unobservable, and typically made without awareness (Heider, 1958; Jones & McGillis, 1976; Hastie, 1984; Kelley, 1967, 1973; Uleman, 1987; Winter & Uleman, 1984; Wong & Weiner, 1981). Attributions are inferences about the causes of actions and events. They represent the causal meaning of situations to observers, and, as such, fall under the rubric of "subjective construal"--a topic with which social psychologists have long been fascinated (Ross & Nisbett, 1991).[1] Causal attributions are the only form of subjective construal to have received much research attention in social psychology, and the research has been substantial (see Fiske & Taylor, 1984, for a review). The result of the massive attribution research effort has been to demonstrate convincingly that attributions are crucial to people's interpretations of the social world, and to their social behaviour.

There are four major theories of attribution: Heider's (1958) "naive analysis of action", Jones and Davis' (1965) correspondent inference theory, Kelley's (1967, 1973) covariation model, and Weiner's (1974, 1979) achievement model. All of these theories maintain that people seek to understand the underlying causes of events, not just for the sake of knowing, but also in order to feel a sense of control through

the prediction of future events and outcomes (Heider, 1958; Jones & Davis, 1965; Kelley, 1967; Weiner, 1974).

Heider (1944, 1958) had an enormous impact on later attributional models in social psychology in that he defined the basic issues (Fiske & Taylor, 1984). His "naive psychology" (which was really a naive epistemology, as pointed out by Fiske and Taylor, 1984) proposed that a theory of causal judgement processes could be developed by observing how people talk about the causes of everyday events. Heider's analysis maintained that causal judgements are determined both by perceptions of actors' intentions and abilities and by situational forces that contrain or channel behaviour.

Jones and Davis (1965) argued that once perceivers know about the "noncommon effects" (effect of a particular action compared to the effects of other possible actions) and "social desirability" (constraints imposed on behaviour by social proprieties) of an act, they try to make a correspondent inference (see also Jones & McGillis, 1976). The "correspondence" refers to the linking of perceived actions and motivations to presumed underlying dispositions of actors. Hence, a correspondent inference is an inference about stable properties of individuals (dispositions), which presumably permits predicability. In addition to non-common effects and social desirability, the determination of whether a single action corresponds to a certain disposition may be influenced by perceptions about whether the act was freely chosen, whether the act had hedonic relevance (had a strong consequence for oneself rather than for someone else), and whether the act was intended to affect oneself (positively or negatively) rather than someone else (Jones & Davis, 1965).

Kelley's (1967, 1971) work has had lasting and wide-reaching impact on the field. Kelley focused on general rules, particularly covariation, which he (and

others) assumed was the central principle of the attribution processs. Covariation refers to the idea that "...an effect is attributed to the one of its possible causes with which, over time, it varies" (Kelley, 1971, p. 3). Kelley's covariation model outlined how perceivers ("intuitive scientists") use the attributional criteria of consensus (among actors), consistency (across situations), and distinctiveness (of the event) to make causal attributions about events (see Fiske & Taylor, 1984, for a review). Since people do not always have access to all three types of information, Kelley (1972) suggested that, when covariation data are missing, perceivers are guided by "causal schemata" (organized knowledge about how causes and effects are linked) to fill in the missing information. In these instances, people act more like "intuitive psychologists" (Ross & Anderson, 1982), and are guided by two main principles that have been substantiated in several decades of research: (a) the discounting principle (Kelley, 1973) which holds that if more than one explanation seems plausible, we are less confident of our attributions; and (b) the augmenting principle, which holds that "when there are known to be constraints, costs, sacrifices, or risks involved in taking an action, the action once taken is attributed more to the actor than it would be otherwise" (Kelley, 1973, p. 114).

Weiner's (1974, 1979) achievement model proposed that much of our social world is interpreted in "success or failure" terms, and that attributions in achievement settings depend upon decisions about whether a "success" or "failure" event was caused (a) by something about the actor (internal) or the situation (external), (b) by something internal or external which was stable (relatively fixed) or unstable (mutable) in nature, and (c) by something internal or external which was controllable or uncontrollable by the actor (see also, Weiner & Kukla, 1970). Weiner's work on the dimensional structure of causal analysis continues to have a major impact on attribution research and theory. He proposed (and he and others

have substantiated) that the dimensions underlying perceived causes influence emotion and action. Originally developed to account for behaviour in achievement settings, Weiner's (1974, 1979) dimensional analysis has been applied in a number of other areas, including gender stereotyping (e.g., Deaux, 1976a, 1976b), and helping (Ickes & Kidd, 1976; Meyer & Mulherin, 1980; Weiner, 1980a, 1980b).

### 1.2.0 Causal-attributional dimensions affect helping

The crucial feature of differences in subjective construal is that they may result in important behavioural consequences, as demonstrated by the attribution--affect--altruism relation outlined above (Weiner, 1980a, 1980b). To reiterate, underlying dimensions of ascribed causes of negative events have been shown to affect helping, particularly the perceived controllability of those causes (Barnes, Ickes, & Kidd, 1979; Berkowitz, 1969; Ickes & Kidd, 1976; Meyer & Mulherin, 1980; Piliavin, Rodin, & Piliavin, 1969; Reisenzein, 1986; Schopler & Matthews, 1965; Schwartz & Fleishman, 1978; Schmidt & Weiner, 1988; Weiner, 1979; Weiner, 1980a, 1980b; Weiner & Kukla, 1970; Weiner, Russell, & Lerman, 1978, 1979).[2] The general finding has been that an individual who attributes a victim's problem to causes under the control of the victim--such as poor planning, lack of effort, or bad judgement (e.g., drunkenness)--is less likely to help the victim than an individual who attributes a victim's problem to factors that are the victim cannot control (e.g., disability). The fact that emotion and action are influenced by the underlying properties (or dimensions) of the causes used to explain events has important implications for our theories about the nature of causal analysis and its impact on social behaviour (Meyer, 1980; Meyer & Mulherin, 1980; Passer, Kelley, & Michela, 1978; Weiner, 1974, 1979; Weiner et al., 1971).

*1.2.1 The dimensional structure of causality*

People do appear to "actually organize their thinking in terms of causal dimensions described by attribution researchers and theorists" (Russell, 1982, p. 1138). Two decades of research examining relationships between dimensions of causality and effects of the attribution process indicate that causal dimensions are an important part of the way people process information about events (e.g., Kelley & Michela, 1980; Passer et al., 1978; Russell, 1982; Weiner, 1979; Weiner, Perry, & Magnusson, 1988).

Evidence from diverse sources suggests that two causal ascription dimensions are of central importance in people's explanations of others' misfortunes, and in determining their helping and helping judgements. Those dimensions are locus of causality (whether a cause is perceived to be internal or external to the actor) and controllability (whether an internal cause is controllable by the actor). A third dimension of causal ascription, stability, appears to influence people's judgements about the future; for example, judgements about the potential for a victim's recovery following harm (Weiner, 1986; Weiner et al., 1988). The significance of the locus, controllability, and stability dimensions is strongly supported by theory and past research. The three dimensions were first uncovered through careful observations of people's reactions, then by logically defining the significant dimensions, and later by empirically testing their predicted impact. In a review of conceptual developments and empirical evidence, Weiner (1986) concluded that, with regard to

> the structure of causality or the organization of explanation ...the data ... unambiguously support the contention that there are three dimensions of perceived causality [i.e., locus, controllability, and stability]. Other dimensions are either unreliable (perhaps this suggests that they are specific to a particular context) or are not clearly meaningful.... In addition, these three factors are entirely consistent with the dimensions derived from logical procedures.

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Logical and empirical, deductive and inductive, factor-analytic and
multidimensional procedures--all roads seem to be leading to Rome.
(p. 64, my comment in square brackets)


It should be noted that there are strong arguments against the position that

there are *fewer* than the three causal dimensions yielded by the converging of

rational and empirical approaches (e.g., Anderson, 1983a; Passer et al., 1978;

Weiner, 1986). In a summary of arguments on this issue, Weiner (1986) concluded


correlations between the causal dimensions, or uneven distribution in
multidimensional space, do not invalidate the conceptual distinctions
that have been made, nor do they support the contention that fewer
than three dimensions are needed. (p. 69)


Weiner was referring to the strong correlations that have been observed at

times between causal dimensions (e.g., Russell, 1982). While such correlations

suggest fewer dimensions actually exist in people's causal thinking, several

arguments have been made against that position. One holds that "a failure of

orthogonality at the empirical level does not invalidate separation at the conceptual

level" (Weiner, 1986, p. 69; cf. Anderson, 1983a). For example, height and weight

are strongly correlated but are conceptually separable dimensions. Another

argument against the position of fewer than three causal dimensions holds that

"there is good reason to have an unequal distribution of causes in a

multidimensional causal space" (Weiner, 1986, p. 69; cf. Passer et al., 1978). For

example, there appears to be much more discriminativeness in causal thinking

about traits (stable, internal) than in causal thinking about states (unstable,

internal) or circumstances (external, and stable or unstable) (Passer et al., 1978). In

the Passer et al. study, perceived causes of marital conflict having to do with actors'

traits were cited about twice as often as those having to do with circumstances or

states.

In addition, there are strong arguments against the position that there are *more* than the three causal dimensions yielded by the converging of rational and empirical approaches (Weiner, 1986). For example, "intentionality" does not appear to be a causal attributional dimension, and the global-specific dimension outlined by Seligman et al., while it has face validity, has never emerged as a dimension in any empirical analysis (e.g., Anderson & Riger, 1991; see Weiner, 1986 for lengthier discussion of these issues).

Thus, according to Weiner (1986), the "structure of causality" (3-dimensional) that has emerged as a result of theoretical and empirical work

> is not merely a convenient classification system imposed by attribution theorists. The factor-analytic, multidimensional scaling, and concept formation procedures yield comparable data. The dimensions therefore are part of lay psychology. There is a relative simplicity in the organization of causal thinking, just as there is in the selection of causes, that is available to the naive or amateur attributor. Individuals think in terms of three broad categories, grouping qualitatively distinct explanations within the same rubric on the basis of shared causal properties (pp. 67-8).

In summary, according to the attributional model of helping, a crucial factor in the decision to help is the perceiver's determination of controllability of the cause of a victim's problem (Weiner, 1980a, 1980b). This conclusion is consistent with two decades of research evidence that demonstrates that causal dimensions are an important part of the way people process information about events. The three-dimensional structure that has emerged in theory and research on the organization of causal thinking posits locus, controllability, and stability as key attributional dimensions in people's everyday causal thinking.

*1.2.2 Causal-attributional dimensions: Provisos*

Weiner has offered a number of provisos with respect to our present understanding of the dimensionality of causes (Weiner, 1986; Weiner et al., 1988). First, he noted that the *controllability* concept includes concepts of negligence, responsibility, and intentionality (Weiner et al., 1988). That is, "controllability includes behavior that is voluntarily produced, either with or without anticipation or intention regarding possible consequences of the action" (Weiner et al., 1988, p. 739n).

Second, Weiner pointed out that the *stability* concept also has "multiple meanings" since it includes both the concepts of "reversibility" and "changeability" (Weiner et al., 1988). That is, stability in the attributional context has been defined on the one hand as the "possible reversibility of the presented cause" (and therefore of the problem), e.g., overeating is an unstable (or reversible) cause of obesity. On the other hand, stability may refer to the possibile reversibility of the "efficient cause", e.g., "the efficient cause of paraplegia (nerve damage) is considered stable, although the presenting cause (an auto accident) occurs only once" (Weiner et al., 1988, p. 739n).

Finally, Weiner noted that the controllability concept typically has *not* included a distinction between onset-controllability (the problem) and offset-controllability (the solution). However, for some severely negative outcomes (e.g., AIDS), it has been observed that people pay much more attention to onset-controllability (or responsibility for the problem) than offset-controllability (the solution) (Weiner et al., 1988, p. 739n). In other words, some evidence strongly suggests that perceived onset-controllability of a problem appears to determine affective reactions and who will be helped.

The multiple meanings of controllability and stability may mean less rigorous interpretations than are ideal. Weiner et al. (1988) acknowledged that the "multiple meanings of the controllability label do reduce the precision of our interpretations" (p. 739). However, they argued that the disentangling of these concepts is a complex issue that is still not resolved (e.g., Fincham & Jaspers, 1980).[3] For example, it has been argued that intentionality is part of the controllability concept, but that it is not a *causal attributional* dimension (Weiner, 1986). Rather, "intent describes an action, its anticipated consequences, or a state of the organism. One might refer to ability as internal, or stable, but ...intent does not appear to be a characteristic of a cause" (Weiner, 1986, p. 70).

### 1.2.3 Do people "type" or "dimensionalize" causes?

Most of the extant research on the structure of causal attributions has tested and supported the three-dimensional analysis outlined above (see Weiner, 1986 for a review), and the dimensional approach is "by far the most highly developed at this time" (Anderson & Weiner, 1990). However, some researchers recently have questioned whether causal dimensions are as representative of people's everyday causal thinking as the attribution research would suggest (Anderson, 1983b, 1991). In an examination of the "typical phenomenal organization of attributions for success and failure", Anderson (1991) found that people think about causes both in categorical and dimensional ways. According to the author, people's dimensional thinking seems to be a result of the prior categorizations that are made. Anderson (1991) has argued that the categorical approach complements the current dimensional approach and raises a number of important questions. It will be interesting to see where this new approach leads in the next few years.

The present investigation focused on the dimensionality of causes since, as mentioned, the dimensional approach is quite well developed. Further, of the small amount of work done using a categorical approach (e.g., Anderson, 1983a, 1983b), none of that research has been done in the area of altruism/neglect; that is, in the area of causal attributions about others' fates. For the present investigation, it is interesting to note that, in Anderson's (1991) analysis, only two dimensions appeared to be relevant in people's causal thinking: locus and personal controllability. The dimensions that did **not** appear to be relevant were stability, globality, and external control (or "control-by-someone") (Anderson, 1991). This supports earlier findings of the centrality of locus and controllability in people's everyday thinking about the causes of events (e.g., Anderson & Harvey, 1988; Anderson & Riger, 1991; cf. Weiner, 1986).

## 1.3.0 Determinants of causal attributions

As outlined above, the attribution--affect--altruism research indicates people are *less* willing to help a victim of misfortune when they attribute the cause of the victim's problem to factors that are controllable by the victim (e.g., poor planning or lack of effort), and are *more* willing to to help when they attribute the cause of the problem to factors that are uncontrollable by the victim (e.g., disability) (Meyer & Mulherin, 1980; Reisenzein, 1986; Weiner, 1980a, 1980b). In other words, dimensional aspects of causal attributions have important implications for affect and action. The attribution--affect--altruism relation raises a crucial prior question: What determines the causal attributions people make about actions and events? The two sources of attributions that have been identified in research on this question, namely, the causal structure of the situation (e.g., Alloy et al., 1988; Anderson, 1983a), and an individual's "attributional style" (e.g., Abramson et al.,

1978; Anderson, 1983b; Seligman, 1975) relate, respectively, to two main foci of social psychology, i.e., the situational and personal influences on individual social behaviour.

### 1.3.1 Situational determinants

Situations differ in the behavioural constraints they impose. For example, almost regardless of trait structures, most individuals will sit down to eat a meal or try to find an emergency exit if a fire occurs while they are at a movie theatre (see Anastasi, 1988, for a brief review of the person/situation debate). A major emphasis in social psychology has been the identification of aspects of situations that could account for reactions of people "in general" (e.g., Brunswik, 1956; Lewin, 1935; Murray, 1938). True to this traditional emphasis, causal structure explanations locate the reason for particular attributions about events in the situation (i.e., external to the perceiver/attributor), and argue that certain attributions are ruled out by situational information, or at least become less plausible (Anderson, 1983a; Anderson & Arnoult, 1985b; Kelly, 1963; Wong & Weiner, 1981). For example, the "distinctiveness" of failing an exam that everyone else in your class passes was shown to be related to increases in internal attributions (Frieze & Weiner, 1971). Also, the rarity or unusualness of events has been shown to be related to more external attributions (Feather & Simon, 1971). Further, an individual's memory for his/her history of success/failure on tests was shown to affect attributions about (subsequent) test results (Frieze & Weiner, 1971).

### 1.3.2 Personal determinants

Although behaviour may be strongly constrained by a situation (e.g., sitting down to eat a meal), there may be wide individual differences among people

apparently behaving identically. For example, some people may prefer to eat alone, others in company; some may notice every detail of the foods they are eating and the manners of those around them, while others may not even remember what they ate or with whom they ate. In a similar vein, attributional style explanations locate the reason for particular attributions about events in the perceiver. As outlined earlier, attributional style is conceptualized as personal bias to explain certain events in a systematic way (Abramson et al., 1978; Alloy et al., 1988; Anderson, 1983b; Anderson & Arnoult, 1985a; Anderson et al., 1983; Metalsky & Abramson, 1981; Peterson & Seligman, 1984; Seligman, 1975; Seligman et al., 1979). In other words, the AS notion holds that people differ substantially in an underlying disposition that expresses itself as broad cross-situational consistency in their attributions about some class of situations.

Attributional style was formally introduced to psychology in the learned helplessness model of depression (Abramson et al., 1978), where it has received quite a bit of attention, primarily through research that has employed the Attributional Style Questionnaire (Peterson et al., 1982), or ASQ. The AS concept also has been examined with respect to other "problems in living", particularly loneliness (e.g., Anderson et al., 1983). The importance of attributional style lies in the idea that it plays a mediating role between negative events and certain problems in living, like depression or loneliness. With regard to depression, for example, it has been specifically argued that the tendency to make certain causal attributions appears to increase the risk for depression by way of the presumed negative impact of those attributions on self-esteem (internal attributions) and expectations about future events (stable and global attributions) (Abramson et al., 1978; Peterson et al., 1982). Similar arguments have been made about attributional

style as a risk factor and "maintaining cause" of loneliness (e.g., Anderson & Arnoult, 1985a).

Attributional style is the only "individual difference in construal" to have received much attention to date (Ross & Nisbett, 1991). According to Ross and Nisbett (1991), attributional style has been examined under a number of different names. These include Rotter's (1966) "expectancy for internal versus external control", Bandura's (1977a, 1977b) "self-efficacy", and Dweck's (1975) "mastery versus helplessness". Further, Ross and Nisbett (1991) point out that some research on attributional style has been primarily concerned with identifying the origins of the differences in attributional preferences (e.g., Seligman, 1975), while others have been concerned with developing good measures of the differences (e.g., Crandall, Katovsky, & Crandall, 1965; Rotter, 1966). Still other researchers have been concerned with "teasing apart different aspects of perceived control (for example, Collins, 1974; Lefcourt, 1972; Weiner, Frieze, Kukla, Rest, & Rosenbaum, 1972)" (Ross & Nisbett, 1991, p. 166).

The AS concept, defined as broad cross-situational consistency in attributions about the causes of particular kinds of events, raises a major issue that has plagued and intrigued psychologists for many years: the issue of the relative consistency or specificity of behaviour (see Bem & Allen, 1974, and Mischel, 1973, for reviews). After a brief discussion of the consistency debate, I will examine the issue of cross-situational consistency in causal attributions and, in the process, will discuss some of the strategies that have been used to investigate AS and the outcomes of those studies.

*1.3.3 The issue of cross-situational consistency in behaviour*

The issue of cross-situational consistency in behaviour in general has a long history in psychology. According to Mischel and Peake (1982), the "consistency debate" has revolved around the paradox that, although there are strong intuitive reasons to believe that "people are characterized by broad dispositions revealed in extensive cross-situational consistency" (p. 730), the results of numerous studies do not support the kind of consistency that intuitions suggest. Essentially, after many years and many approaches to the consistency issue (e.g., Allport, 1937, 1966; Bem & Allen, 1974; Hartshorne & May, 1928; Mischel, 1974; Newcomb, 1929; Thorndike, 1905), the conclusion seems to be that cross-situational consistency coefficients of modest size (typically not exceeding $r = .20$ on average), are the best that can be expected (Mischel & Peake, 1982).[4] To highlight the "modest magnitudes" of cross-situational consistency coefficients, I will briefly mention some findings of the Carleton Behavior Study reported by Mischel and Peake (1982). In their examination of the construct validity of "conscientiousness", Mischel and Peake reported that 20% of the cross-situational consistency coefficients were statistically significant and the significant correlations showed some patterns of organization ("coherences"), but the average cross-situational consistency coefficient was only .13 and the overall pattern of correlations was "erratic". Note that the authors reported aspects of both the consistency and the discriminativeness of behaviour. Indeed, the authors consider that consistency and discriminativeness in behaviour are both valid phenomena. Accordingly, Mischel and Peake (1982) argue that the "modest magnitudes" of cross-situational consistency coefficients

can be construed as evidence either for the relative discriminativeness of behavior or for its coherence, and as evidence either for a stable thread of individual differences or for the need to take account of situations seriously. How one reads the results depends on the particular purposes of the research or assessment task. (p. 737)

Interpretations of the evidence are often guided by researchers' understanding and beliefs about what is meant by the term "trait". As Anastasi (1988) has noted, the more extreme, early view of personality traits as "fixed, unchanging, underlying causal entities" (p. 555) gradually has been replaced with the view that traits are somewhat situationally specific (e.g., Mischel, 1969, 1973; Jackson & Paunonen, 1980). In other words, it has been argued that persons and situations are no longer considered incompatible ways of categorizing behaviour (Anastasi, 1988). A good example of the recent consensus on the person-situation debate is the Test Anxiety Inventory, or TAI (Spielberger et al., 1983), a self-report inventory for measuring test anxiety, in which "the trait is defined in terms of a specified class of situations, those centering on tests and examinations" (Anastasi, 1988, p. 557). Another recent measure, the Test Anxiety Profile, or TAP (Oetting & Deffenbacher, 1980) provides an even greater degree of situational specification for the "test anxiety" trait. Test items cover "feelings of anxiety" (5 items yielding one score) as well as "thought interference" (6 items yielding one score). Both scores are obtained in each of six situations in which respondents are asked to imagine themselves, i.e., (1) a multiple choice test, (2) a time limited quiz, (3) an unannounced "pop" quiz, (4) an essay test, (5) giving a talk, and (6) a math test (Oetting & Deffenbacher, 1980).

The conceptualization of what is meant by "trait" or "cross-situational consistency in behaviour" has also been influenced by some recent cognitive approaches to person categorization (e.g., Cantor & Mischel, 1979). For example,

when Mischel and Peake (1982) investigated the issue of cross-situational consistency from a "cognitive prototype" approach (e.g., Cantor & Mischel, 1979), they found evidence suggesting that people judge behavioural consistency on the basis of the temporal stability of behaviours that are highly prototypic of a particular trait category. That is, there is some evidence to suggest that people judge the presence of a trait not by looking at broad cross-situational consistency in behaviour, but by looking at the temporal stability of certain behaviours that they perceive to be central to the trait category (Mischel & Peake, 1982). Conversely, it appears people judge the absence of a trait not by examining behavioural discriminativeness, but by looking at the temporal instability of the behaviours they consider to be central to a particular trait category (Mischel & Peake, 1982).

From another perspective on this issue, Mischel (1979) has argued that people differ in the degree to which their behaviour is consistent or inconsistent across situations. That is, Mischel (1979) proposed that there are individual differences in behavioural discriminativeness. According to this argument, some people seem to be more adaptive or "flexible" in the face of situational changes, and this adaptability is reflected by some inconsistency (discriminativeness) in their behaviour across situations; however, other people seem more "rigid", or less adaptable to situational changes, and this rigidity is reflected by a good deal of consistency in their behaviour across situations. Further, Mischel (1979) raised a point that makes an already difficult problem even more complicated. That is, (and as pointed out in the idiographic approach of Allport, 1937, Kelly, 1963, and others) Mischel (1979) proposed that people will differ in the situations over which they show behavioural consistency, and that a person's goals, past experience, and subjective construal of situations will affect the particular situational combinations over which they are consistent.

In summary, the issue of the specificity versus the generalizability of personality traits has a long history in psychology. After years of effort, the evidence points to only moderate behavioural consistency across situations, despite strong intuitions to the contrary (e.g., Mischel & Peake, 1982). However, changing conceptualizations of traits as more situationally-specific may lead to a better understanding of the moderate behavioural consistencies across situations found in earlier studies (e.g., Mischel, 1969, 1973; Jackson & Paunonen, 1980). Reconceptualizations of traits given the earlier evidence and more recent cognitive "prototype" models of person categorization (e.g., Cantor & Mischel, 1979) have provided a promising approach to an old problem. In addition, it has been recognized that discriminativeness in social behaviour varies among individuals and that the situations across which behavioural consistency is observed also varies among individuals (Mischel, 1979).

*1.3.4 Cross-situational consistency and discriminativeness in causal attributions*

The AS construct, like the notion of test anxiety above, reflects the more recent view that traits are somewhat situationally specific. The AS construct usually has been defined as an attributional tendency over some specific class of situations (e.g., Anderson et al., 1988; Peterson et al., 1982). Probably the most crucial question faced by AS researchers has been how to determine the appropriate level of situation specificity to use when assessing attributional style, i.e., how to organize situations in a way that would capture important AS differences, if they exist (Anderson et al., 1988). According to Anderson et al., (1988), AS is appropriately assessed at an "intermediate level of specificity" (p. 981), in which situation-types are not so broad as to "fly in the face" of the vast research literature on the consistency debate. On the other hand, an AS should not

be assessed over a too narrow range of situation-types. This point reflects Mischel's (1973) proviso that a trait can be nullified by over-qualifying it with descriptors; i.e., the more qualifiers there are to a trait, "the more the "trait" becomes a relatively specific description of a behavior-situation unit" (p. 257). Further, Mischel (1968) reported evidence that correlations between measures of some trait may be reduced to zero by "even trivial situational differences" (p. 177). As previously mentioned, there are many seemingly trivial situational influences that may have non-trivial effects on causal attributions (e.g., the social salience of an actor). The difficult task faced by AS researchers has been to find the appropriate level of situation specificity over which to assess the AS construct. In general, they have selected situations they assumed were applicable to the construct at hand, and measured people's attributions about those situations on the causal dimensions they believed to be crucial (e.g., Anderson et al., 1983; Peterson et al., 1982).

Thus, the efforts of AS researchers have focused on the relative contributions of persons and situations to causal attributions (e.g., Anderson et al., 1983, 1988; Cutrona et al., 1985; Peterson et al., 1982). For example, in one study that examined the validity and utility of the attributional style construct, the authors found modest evidence of attributional styles "when assessed at a moderate level of specificity" (Anderson et al., 1988, p. 989). The authors concluded that "AS does not appear to be as ...cross-situationally consistent as originally thought. Neither is it so situationally specific as to cease being a meaningful individual difference construct" (Anderson et al., 1988, p. 989).

In another study that examined the construct validity of attributional style, strong evidence of discriminativeness and weak evidence of cross-situational consistency in causal attributions were present in people's responses to items on the Attributional Style Questionnaire (Peterson et al., 1982), or ASQ (Cutrona et

al., 1985). The authors reported that averages of between 3.8% and 33.9% of the variance in individual ASQ items could be explained by attributional styles. The authors concluded that the weak support for attributional style in their study necessitated more attention to the definition of the construct, and specifically to the range of situations the construct applies to, if any progress is to be made in understanding the role of attributional style in the development and course of depression (Cutrona et al., 1985).

Positions on the acceptability of the modest evidence of AS reflect either a "glass is half full" or a "glass is half empty" point of view, and highlight the point noted by Mischel and Peake (1982) earlier about interpretation and research focus. For some AS researchers, the modest evidence of AS is acceptable, and AS is considered to be a valid and useful construct worthy of more research effort (Anderson & Deuser, 1991; Anderson et al., 1988; Peterson, 1991; Peterson & Villanova, 1988). For others, the modest evidence for AS puts its existence into serious doubt and raises the suggestion that research efforts would be better spent elsewhere (e.g., Cutrona et al., 1985). I tend to side with Anderson et al. (1988) who argued on the basis of evidence from a number of studies that neither unbridled optimism nor undue pessimism is warranted regarding the validity and utility of the AS construct, and that much further work is necessary.

## 1.4.0 A critical evaluation of a new attributional style construct

One issue that has not been raised by attribution researchers is that although attributional style has been examined exclusively in the area of self-perception, the construct may be applicable to human perception more generally. The research for the present thesis directly addressed the question of whether attributional style pertains to person perception. One area of person perception was

examined, i.e., perception of the causes of others' misfortunes. Guided by the observation that most current research on causal attributions examines "...two domains of social behaviour, each of which involves a pair of potentially causal actors: achievement situations, involving teachers and students, and victimization, involving harmdoers and victims" (Hamilton, 1987, p. 33), I chose to work in the latter area, focusing upon reactions to victims of misfortune, and drawing upon the attributional model of helping (Weiner, 1980a, 1980b).

Although several AS's for others' misfortunes are possible, controllability AS was focused upon in the present research, since "controllability" has already been shown to be a predominant dimension in people's causal thinking about others' misfortunes (Weiner, 1986). Assuming that attributional style is a "trait"-like tendency to explain events in particular way, it is an empirical question whether there exists enough cross-situational consistency in people's attributions about the causes of others' misfortunes to warrant the name "attributional style". The goal of the present thesis was to critically evaluate the concept of a "controllability attributional style for others' misfortunes", as operationalized by a new AS measure developed for this investigation. To be critically evaluated, any construct must first be clearly defined. In the next section, I define and elaborate the new AS construct.

### 1.4.1 Construct definition and elaboration

By "controllability attributional style for others' misfortunes", I mean the following in a person: a tendency to respond in the same general way (i.e., to make particular causal inferences, namely, internal, controllable inferences) toward a specific class of stimuli (viz., others' misfortunes). In the present thesis research, I used Weiner's (1979, 1980a, 1988) conceptual definitions of the locus of causality (i.e., whether the cause is internal or external to an actor) and stability (i.e.,

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whether the cause is perceived as temporary or permanent) attributional dimensions. I also used McAulay, Duncan, and Russell's (1991) elaboration of Weiner's (1979, 1985) controllability dimension (i.e., whether a cause is subject to personal influence or not), as it permitted both internal and external causes to be considered controllable.

Controllability attributional style for others' misfortunes was defined as a "tendency to respond" rather than as a set of acts since the "behaviour" of making controllability attributions about others' misfortunes can, of course, be situationally-induced. Controllability AS for others' misfortunes should be thought of as an individual difference variable, the premise being that some persons need little situational pressure to make (internal) controllability attributions about others' misfortunes, while others often require significantly more.

Conceived of as a set of causal inferences (internal, controllable) that covary, the operational definition of the construct was a score on a scale on a new AS measure developed for this investigation. Controllability attributions for others' misfortunes were assumed to fluctuate over situations as a function of the perceived controllability of those misfortunes (i.e., to be situationally-induced). However, the construct was defined in terms of individual differences in the frequency with which others' misfortunes would be attributed both to internal and controllable causes. According to this definition, an individual high in the "trait" should be more likely to perceive a wide range of others' misfortunes as due to internal, controllable causes, and to respond to such misfortunes with (internal) controllability attributions.

Covariation of the internal and controllable dimensions of causal ascription is central to the definition of the new AS construct. People who locate the causes of others' misfortunes inside the victims but who do not think the victims had any

control over the causes are **not** who I defined as controllability AS individuals. Similarly, people who locate the causes of others' misfortunes outside the victims, whether they think the cause was controllable by someone or not, are **not** who I defined as controllability AS individuals.

As noted earlier, according to Cronbach and Meehl (1955), a construct's validity cannot be determined independently of the test or tests that presumably measure the construct. Therefore, I now report a series of studies in which a new attributional style measure was iteratively developed, the test's internal characteristics were examined, and external correlates of controllability attributional style were examined.

# CHAPTER II

## TEST DEVELOPMENT AND EVALUATION: 1

Investigations that involve trait constructs raise the numerous and well-documented problems associated with construct validity and predictive utility (e.g., Mischel, 1968, 1973). In construct validation, the main goal is to determine the psychological processes that underlie people's responses to test items (Cronbach & Meehl, 1955). Construct validation in psychology typically requires a theory-guided approach at all stages of the validation process and such an approach was taken in the present evaluation.

### 2.1.0 Phase One: Test items

One of the first tasks in developing any new measure is compiling a pool of test items from which to choose. These items should be referents applicable to the trait in question. Thus, the first question in developing a measure of the new construct was how to organize situation-types over which to assess controllability AS for others' misfortunes. In constructing the new attributional style measure for this investigation, it was instructive to examine the test items on the two main attributional style measures used in other research domains--the Attributional Style Assessment Test, or ASAT, (Anderson et al., 1988), used in research investigating cognitive mediators of loneliness and other "problems in living", and the Attributional Style Questionnaire, or ASQ, (Peterson et al., 1982) which has been used primarily in research on cognitive mediators of depression.

The ASAT-III and -IV versions of Anderson's test are comprised of 20 event/items and 36 event/items, respectively. On both the ASAT-III and -IV, one-half of the test items have to do with interpersonal situations (successes or

failures), which have been argued to be specific situational referents of loneliness AS. The other half of the test items have to do with non-interpersonal situations (successes and failures), which are thought to be among the situational referents of depressive AS. For example, one of the interpersonal failure items reads:

> You have just attended a party for new students and failed to make any new friends.

Respondents then ascribe one likely cause for the failure (open-ended format), and rate the cause on six, 9-point semantic differential scales (discussed below).

The ASQ (Peterson et al., 1982) is a self-report questionnaire that purportedly measures people's attributions about hypothetical positive and negative outcomes. The ASQ is comprised of twelve items, six of which have to do with people's attributions about affiliative situations, and six which have to do with achievement situations. Also, half the items are phrased as positive outcomes and the other half are phrased as negative outcomes. The following is an example of one of the ASQ achievement negative outcomes:

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

Respondents then ascribe one likely cause for the failure (open-ended format), and rate the cause on three, 7-point semantic differential scales (discussed below). However, it has been argued that the content validity of items on the ASQ is low with regard to behavioural referents of the AS construct ("depressive AS") it purports to measure (e.g., Cutrona et al., 1985). In addition, the ASQ has been challenged for measuring attributions about outcomes, rather than about noncontingencies, as postulated by the reformulated learned helplessness theory

(Abramson et al., 1978; Metalsky & Abramson, 1981) from which it was developed (e.g., Weiner, 1986).

Several researchers have questioned whether hypothetical or actual life events would provide a better assessment of AS (e.g, Anderson et al., 1988; Cutrona et al., 1985). According to some, there are a number of advantages to using hypothetical events rather than actual life events in assessing attributional style (e.g., Alloy et al., 1988). For instance, it has been argued that hypothetical outcomes are "...causally ambiguous ...and are unlikely to force individuals toward one particular type of attribution" (Alloy et al., 1988, p. 17). Second, it has been argued that with hypothetical events, it is possible to measure subjects' responses to a wide variety of situations, thereby ensuring a "style" is being assessed (Peterson et al., 1982). Third, the same set of hypothetical events can be presented to many subjects (Peterson et al., 1982). Finally, it has been argued that the generality of AS should be more pronounced for familiar, hypothetical events than for actual events, as the former activate more cognitively simple structures (e.g., schemata) than do actual events (Anderson et al., 1988). However, there is only modest evidence of AS whether it is assessed for hypothetical (e.g., Anderson et al., 1988; Arntz et al., 1985; Cutrona et al., 1985; Peterson et al., 1982; Peterson & Seligman, 1984) or actual negative events (e.g., Cutrona et al., 1985; Miller et al., 1982). Thus, the matter would seem to be more a question of practicalities and interest for the individual AS researcher.

Existing AS measures share a problem common to many investigations of trait constructs; i.e., the specific referents of the trait(s) tend to be chosen by the researchers (Mischel & Peake, 1982). This continues to be the situation in much of the research on attributional style, despite the possibility that investigators may be committing another "attribution researcher error" (Russell, 1982) in having people

think about the causes of only a limited set of events/outcomes, or about the causes of widely different classes of negative (and positive) events/outcomes, without accounting for those differences. For example, certain classes of events/outcomes may be salient for a particular reason (because they happen more often in that part of the world). More importantly, it seems crucial to account for differences in perceived severity of negative events/outcomes since perceived severity has been demonstrated to have a large impact on attributions (e.g., Walster, 1966; Shaver, 1985). To offset some of these problems, I used a procedure similar to Mischel and Peake's (1982), in which the specific referents for the trait construct under investigation, others' misfortunes, were gathered from subjects' own perceptions. Specifically, I asked subjects to list as many referents (i.e., severe hypothetical negative events) as they could think of in a limited amount of time. These referents were then sorted and categorized. The details and results of the study are reported in Study 1 below.

# Study 1: Generation of test items

The purpose of Study 1 was to examine people's phenomenal organization of misfortunes, with a view to developing a database from which to select as test items for a new AS measure, hypothetical negative events that are generally available to individuals.

## Method

*Subjects*

Participants were 39 female and 36 male first and second year student volunteers from Simon Fraser University. The average age of the students in the sample was 20.22 years ($SD = 2.0$).

*Procedure*

The experiment was described as a study of people's beliefs about negative events. In testing sessions of 8 to 10 people per session, subjects were randomly assigned to one of two conditions (see reference note) that differed by the target of attribution ("self" vs "stranger").[1] In each condition, subjects had five minutes to generate a list of as many severe negative events as they could imagine that could possibly happen to the target person.

## Results and Discussion

Subjects generated more than 1000 negative events, which were then tallied by the researcher for sorting. Using a consensus rule, three trained raters sorted the 1000[+] misfortunes into the 88 categories shown in Table 1. The consensus rule stipulated that all raters had to agree about the category to which any particular

misfortune belonged. Table 1 also shows the number of times the event was endorsed for self and for hypothetical other.

Appendix A contains a "catalogue" of the negative event/outcome categories decided upon by the three raters and examples of the corresponding misfortunes (exemplars) generated by the subjects.

Table 1

*Frequency of subject-generated negative events/outcomes, in Self and Stranger target groups*

| SELF | OTHER | NEGATIVE EVENT/OUTCOME CATEGORY |
| --- | --- | --- |
| 30 | 23 | Having A Major Permanent Physical Injury |
| 26 | 25 | Having A Loved One Die |
| 11 | 13 | Being Divorced Or Separating From One's Spouse |
| 7 | 14 | Being Sexually Assaulted (Raped) |
| 8 | 10 | Experiencing A Serious Financial Loss |
| 12 | 4 | Having More Than One Loved One Die |
| 8 | 8 | Losing Or Being Fired From A Job |
| 7 | 9 | Becoming Seriously Ill |
| 9 | 6 | Becoming Terminally Ill |
| 6 | 9 | Being In A Car Accident |
| 6 | 9 | Being Kicked Out Of University |
| 6 | 7 | Being Unable To Get A Job In One's Chosen Career |
| 8 | 3 | Dying Prematurely |
| 5 | 6 | Having One's Possessions Seriously Damaged Or Lost |
| 6 | 3 | Dying |
| 5 | 4 | Being Unable To Have Children |
| 3 | 6 | Being Unable To Find Work |
| 7 | 1 | Being Unable To Graduate |
| 7 | 1 | Having A Nuclear World War Break Out |
| 4 | 4 | Being Unable To Fulfill One Or More Life Goal(s) |
| 6 | 1 | Being Unable To Reach Academic Goals |
| 4 | 3 | Being Sent To Prison |
| 2 | 5 | Being Addicted Or Dependent On Drugs/Alcohol |
| 4 | 2 | Experiencing Serious Mental Illness (Loss Of Mental Faculties) |
| 1 | 5 | Having An Unwanted/Unplanned Child |
| 5 | 0 | Being In A Fatal Accident |
| 5 | 0 | Being In A National Political Crisis |
| 4 | 1 | Being Separated From Loved Ones |
| 3 | 2 | Being Betrayed By A Loved One |
| 3 | 2 | Being Physically Assaulted |
| 1 | 4 | Being Robbed |
| 1 | 4 | Having Mild Social/Interpersonal Problems |
| 1 | 4 | Having Loved One(s) Addicted Or Dependent On Drugs/Alcohol |
| 4 | 0 | Being Poor, Homeless, Reduced To Begging |
| 3 | 1 | Experiencing An Extreme Physical Assault |
| 2 | 2 | Being Abused Sexually Or Physically |
| 2 | 2 | Being Involved In A Natural Disaster |
| 2 | 2 | Failing A Number And Possibly All University Courses |
| 2 | 2 | Losing A Baby Through Miscarriage |
| 1 | 2 | Being Abandoned By A Loved One |
| 1 | 3 | Getting Into Trouble With The Law |
| 1 | 3 | Getting One Or More Poor Grade(s) |
| 3 | 0 | Being Persecuted Because Of One's Race Or Religious Beliefs |

Table 1 (continued)

| SELF | OTHER | NEGATIVE EVENT/OUTCOME |
|------|-------|------------------------|
| 3 | 0 | Having One Or More Minor Disruption(s) To Lifestyle |
| 3 | 0 | Finding Yourself In A Dangerous Situation |
| 2 | 1 | Being Kicked Out Of Home (Family Severs Ties) |
| 2 | 1 | Being Unable To Support One's Family |
| 2 | 1 | Causing Someone's Death |
| 2 | 1 | Discovering That One's Spouse Is Having An Affair |
| 2 | 1 | Experiencing Mild Mental Illness/Problems |
| 2 | 1 | Having Severe Interpersonal Problems (No Friends/Socially Outcast) |
| 2 | 0 | Experiencing An Environmental Disaster (Irreversible Destruction) |
| 2 | 0 | Being Involved With Drugs/Drug Dealing |
| 2 | 0 | Having Some Prized Possession Seriously Damaged Or Lost |
| 2 | 0 | Having A Loved One With Non-Permanent Physical Injury |
| 2 | 0 | Having One Or More Loved One(s) With Serious Illness/Disease |
| 2 | 0 | Having One's Parents Divorce |
| 1 | 1 | Being Completely Alone (No One To Care About) |
| 1 | 1 | Being In A Bad Marriage |
| 1 | 1 | Being Kidnapped |
| 1 | 1 | Having A Loved One Develop A Terminal Illness |
| 1 | 1 | Having One's Child Abducted By Someone |
| 1 | 1 | Losing One's Faith |
| 1 | 1 | Losing Or Being Fired From An Important Career Job |
| 1 | 1 | Making A Major Career-Planning Mistake |
| 0 | 2 | Being Publically Humiliated (Embarassment/Loss Of Face) |
| 0 | 2 | Failing A University Course |
| 0 | 2 | Having A Bad Accident |
| 0 | 2 | Having A Non-Permanent Physical Injury |
| 0 | 2 | Having Low Self-Esteem |
| 1 | 0 | Becoming Mildly Ill |
| 1 | 0 | Being In An Airplane Crash |
| 1 | 0 | Causing Serious Harm To Another Person |
| 1 | 0 | Crashing One's Motorbike |
| 1 | 0 | Experiencing A Mild Financial Loss |
| 1 | 0 | Getting Old |
| 1 | 0 | Having A Child With A Medical Disorder |
| 1 | 0 | Having A Loved One With Major Permanent Physical Injury |
| 1 | 0 | Having A Poor Relationship With One's Children |
| 1 | 0 | Having Bad Physical Looks That Affect Relationships With Others |
| 1 | 0 | Having One's Child Abused By Someone |
| 1 | 0 | Having One's Child Injured |
| 0 | 1 | Being Sexually Harassed |
| 0 | 1 | Getting Caught Cheating On An Exam In University |
| 0 | 1 | Having A Loved One With Mild Mental Illness/Problems |
| 0 | 1 | Having An Identity Crisis |
| 0 | 1 | Having One's Child Taken Away By Someone |
| 0 | 1 | Losing A Pet |

## 2.2.0 Phase Two: Causal dimension rating scales

The second task in developing any new, dimensional measure of attributional style is to ensure that the relevant causal dimensions are appropriately and reliably measured. Thus, the second question in developing a test of the new construct was how to measure the causal dimensions central to the construct. Once again, it was instructive to examine the two main attributional style measures used in other research; the ASAT (Anderson et al., 1988) and the ASQ (Peterson et al., 1982).

The ASAT-III and -IV, the dimensional versions of the ASAT, claim to measure people's attributions about hypothetical positive and negative events on six dimensions, namely, locus, stability, and globality, intentionality, changeability, and controllability (Anderson & Arnoult, 1985a; Anderson & Harvey, 1988). Globality, changeability, and intentionality dimension subscales have been dropped from more recent versions of ASAT (Anderson, 1990). Globality was dropped because it has failed to turn up as a valid dimension in much of the empirical work (e.g., Anderson & Riger, 1991; Weiner, 1986). Changeability and intentionality were dropped because both have been reported to add little to the understanding of attributional style (Anderson, 1990), and because intentionality does not seem to be a causal-attributional dimension (e.g., Weiner, 1986). As mentioned earlier, locus and controllability seem to be central in people's causal thinking (e.g., Anderson, 1991; Anderson & Harvey, 1988) and a number of studies that have used the ASAT support this contention. For example, Anderson and Harvey (1988) reported that only the locus and controllability causal dimensions (as measured by the ASAT) contributed uniquely to predicting the problems in living examined in the study (i.e., depression, loneliness, and shyness). In their evaluation of the construct validity of the ASAT, Anderson et al. (1988) combined new evidence with a

reassessment of earlier findings from a number of studies. The authors reported that the attributional styles measured by the test showed "both convergent and discriminant validity when assessed at a moderate level of specificity" (Anderson et al., 1988, p. 989). However, the dimensional ASATs have a few limitations. Although the ASAT-III and IV measure the locus and controllability dimensions, only one semantic differential scale is used to measure each of the dimensions in each situation, and only low to moderate reliabilities have been reported for the causal subscales--"in the range of .4 to .7" (Anderson, 1990, p. 2). According to Anderson et al. (1988), "the various ASAT measures ...appeared sufficiently reliable to warrant future use in research settings, although improvements would benefit researchers and practitioners alike" (p. 989). Further, the instructions for the ASAT-III and IV tests define the six causal dimensions for subjects, which could potentially bias subjects' responses to the tests. Finally, the format or layout of the ASAT scales seemed to be a bit awkward in that the scales only appear once on page 1 (with the instructions and scale definitions), and respondents have to flip pages back and forth to do the causal dimension ratings.

The ASQ (Peterson et al., 1982) purportedly measures three causal-attributional dimensions, namely, internality (locus), stability, and globality. In the reformulated learned helplessness theory, the perceived globality, stability, and internality of response-outcome noncontingency are thought to influence, respectively, the generality (scope), chronicity (duration), and self-esteem deficits associated with depression (Abramson et al., 1978; Alloy et al., 1988). A dauntingly large research literature supports the general notion that the tendency to make internal, stable, and global attributions about negative events (and to make external, unstable, and specific attributions about positive events), known as a depressive AS, puts one at risk for depression (e.g., Alloy et al., 1988; Peterson et

al., 1982; Peterson, Schwartz, & Seligman, 1981; Peterson & Seligman, 1984; Sweeney, Anderson, & Bailey, 1986). Attributional styles, as measured by the ASQ (Peterson et al., 1982), have been shown to explain a significant proportion of the variance in measures of depression such as the Beck Depression Inventory or BDI (Beck & Beck, 1972); e.g., Perloff & Persons (1988). However, the ASQ has been challenged on a number of fronts, including construct validity (Cutrona et al., 1985), the use of the globality dimension (Weiner, 1986), the failure to account for (un)controllability (e.g., Anderson & Deuser, 1991; Weiner, 1986), and the use of an achievement-based dimensional model of attribution (Anderson et al., 1983).

As mentioned above, only weak evidence for attributional styles purportedly measured by the ASQ were found by Cutrona et al. (1985). Further, as mentioned previously, globality has failed to turn up as a valid dimension in much of the empirical work (e.g., Anderson & Riger, 1991; Weiner, 1986). Also, although the reformulated model focuses on the importance of perceived noncontingency (which implies uncontrollability) in determining reactions to events, the ASQ (which was developed to test specific predictions from that model) does not measure perceived (un)controllability (Peterson et al., 1982). In a similar vein, although AS has mainly been examined in relation to depression, the attributional response options available to subjects in those studies typically are "based on a dimensional model derived for achievement situations" (Anderson et al., 1983, p. 128), as in the ASQ. That is, Anderson et al. (1983) argued that the attributional basis of the clinical symptoms under investigation were not being appropriately addressed, since the attributional response options were not based on a model derived for situations relevant to depression. Thus, the range of subjects' natural explanations for outcomes in situations relevant to depression (only some of which are achievement-oriented) was not covered, and, although theoretically important dimensions were

examined, the "attributional language" may have ignored attributional components critical to depression (Anderson et al., 1983).

Cutrona et al. (1985) suggested causal attributions about events and outcomes be measured using Russell's (1982) causal dimension scale (or CDS). Based on Weiner's dimensional approach to causal attributions, the CDS measures three dimensions of causal attributions (controllability, locus, stability) for any particular event of interest to the attribution researcher (Russell, 1982). However, scale reliability and validation has been assessed mainly using achievement outcomes (Russell, 1982; Russell, McAulay & Tarico, 1987). Each of the CDS subscales (locus, controllability, stability) is measured by three items, and Russell (1982) reported the reliabilities (coefficient alphas) for the three subscales ranged between .73 and .88. The author reported the three-factor structure of the CDS was confirmed using factor analysis (Russell, 1982). Nonetheless, the CDS has some limitations. In initially reporting on the scale, Russell (1982) indicated a coefficient alpha of .73 for the controllability subscale. However, later studies (e.g., McAulay & Gross, 1983; Russell et al., 1987) reported much lower coefficient alphas for the controllability subscale; .52, and .51, respectively, for the two studies. The two later studies reported coefficient alphas for the locus subscale (.78 & .86, respectively) and the stability subscale (.83 & .85, respectively) that corroborated the original work (McAulay & Gross, 1983; Russell et al., 1987). A further difficulty with the CDS was the finding by a number of researchers that the locus and controllability dimensions were highly correlated (McAulay & Gross, 1983; Russell, 1982; Russell et al., 1987). Thus, the question arose as to the discriminant validity of the two subscales. However, Russell et al. (1987) argued that, rather than reflecting low validity, the correlation between the two subscales likely reflected the kinds of attributions that people made in that particular situation. In that study,

attributions were assessed for an exam result and the majority of subjects attributed the result either to unstable effort or to task difficulty (Russell et al., 1987). According to Russell et al. (1987), "situations where different types of attributions predominate may greatly alter the association between these two measures" (p. 1256). This argument is in accordance with Anderson's (1983a) finding that the causal structure of a situation influences the attributions people make and thus the relations among the causal dimensions. Also, as mentioned earlier, the existence of correlations between dimensions does not necessarily invalidate the separability of dimensions at a conceptual level (Anderson, 1983a; Weiner, 1986).

Since the CDS (Russell, 1982) is open-ended about the type of event respondents may be asked to explain, the measure was easily adaptable to research on attributions about others' misfortunes. The CDS was designed to measure attributions about a specific outcome (situation), not attributions across a number of outcomes as is required for an attributional style measure (Russell, 1982). However, by linking multiple copies of the CDS together, I had the preliminary multiple-situations format that is needed for measuring attributional style. Further, the causal dimension subscales required only slight re-wording of the rating anchors for the present investigation of others' misfortunes. It is important to note however that the CDS measures three dimensions of causal attributions, locus, controllability, and stability, only two (i.e., the locus and controllability dimensions) of which were relevant to the present investigation. Thus, although the stability dimension was measured, it was not central to the present evaluation of controllability attributional style for others' misfortunes.

## 2.3.0 Phase Three: Constructing the new AS test

In keeping with the suggestion of Alloy et al. (1988) that negative events that are "...causally ambiguous ...are unlikely to force individuals toward one particular type of attribution" (p. 17), I decided to keep the wording of the hypothetical misfortunes on the new test as causally ambiguous as possible. This was achieved by using only outcome labels, such as "Cancer", or "Bankruptcy", as the test items. For the first iteration of the new test, twenty negative outcomes were selected from a range of four types of misfortune. The misfortune-types were those that had been frequently cited in Study 1 as likely to happen to a stranger. Thus, I selected five examples of each type of misfortune. Causal attributions about each of the misfortunes were assessed using the 9-item CDS (Russell, 1982), slightly adapted for the present research.[2] An example of one of the items and a couple of rating scales are presented below:

1. Cancer.
major cause: _____

*Think about the reason you have written above. The items below concern your impressions or opinions of the cause of the outcome. Circle one number for each of the following scales.*

A. Is the cause something that:

| Reflects an aspect of a person with cancer | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Reflects an aspect of a situation |

B. Is the cause:

| Controllable by a person with cancer or by other people | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Uncontrollable by a person with cancer or by other people |

Appendix B contains the full first version of the new AS test. Informally, thirty subjects were presented with the new test. In addition to asking subjects to complete the test, I also asked for their comments and suggestions on all aspects of the test. The major finding was that few could complete the instrument as it was far too long. One or two subjects completed at most 8 misfortune-items; most of the subjects thought 5-6 misfortunes (and attendant ratings) more reasonable.

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To shorten the test, I asked twelve academic colleagues to choose the "best" 6 from the 20 misfortune items. Criteria for "best" included meaningfulness, clarity of meaning, and good diversity within the limited range of problems ("serious negative events"). I included the most common choices in the next version of the test.

At about this time, I discovered that Russell and his colleagues had developed a revised version of the CDS (CDSII) (McAulay, Duncan, & Russell, 1991). I examined the "in press" manuscript and decided to use the revised version of the CDS in my investigation. McAulay et al. (1991) claimed to have disentangled the locus and controllability dimensions (the main problem plaguing the earlier version of the CDS) and posited two new control dimension scales; personal control and external control. Since the focus of the present investigation was a construct defined by the covariation of locus and personal control attributional dimensions, the CDSII looked very promising. On the CDSII, three questions purportedly measure each of four causal dimensions: locus, personal control, external control, and stability (McAulay et al., 1991). Thus, the CDSII is a 12-item scale. CDSII subscales were reported have good reliability (McAulay et al., 1991), as follows: in four separate studies, coefficient alphas for the locus dimension ranged from .60 to .71 ($M$ = .67); for the personal control dimension, from .71 to .90 ($M$ = .79); for the external control dimension, from .71 to .91 ($M$ = .82); for the stability dimension, from .65 to .68 ($M$ = .67). Again, since the CDSII is open-ended for the type of outcome/event respondents may be asked to explain, it was easily adaptable to research on attributions about others' misfortunes. And again, only slight re-wording of the rating scale anchors was required. However, it is again important to note that the CDSII measures four dimensions of causal attributions, only two (i.e., the locus and personal control dimensions) of which are relevant to the construct

under investigation, controllability AS for others' misfortunes. Thus, in using the CDSII, the stability and external control dimensions were measured, but they were not central to the present investigation.

The wording of instructions and layout of the new test form was given careful consideration. The form was kept to four pages in length, with two misfortunes (plus associated ratings) per page. The full second version of the test is presented in Appendix C. As shown in Appendix C, the only definitions in the test's instructions regarded the terms, "the person", and "other people", in several of the rating scale labels. The instructions for the causal ratings were essentially identical to those on the the CDSII (with slight re-wording for person perception). That is, the test's semantic differential scales were anchored with reasonably clear labels and interpretations of the rating scales were left to the respondents.

Informally, I asked 10 subjects to complete the 6-misfortune version of the new test and to comment on all aspects of the test. The major finding was that no-one reported having any important difficulties with content, length, or clarity of instructions and items. Further, all of the 10 respondents finished the new test within 20 minutes. This version of the test was given to a large sample of college students in Study 2, described below.

## Study 2: Test (Construct) Evaluation

The purpose of Study 2 was to examine the internal characteristics of the new AS test and to examine the construct validity of "controllability AS for others' misfortunes", as operationalized by the new test.

## Method

*Subjects*

The new AS measure was given to 365 undergraduate students (228 females, 130 males; 7 did not indicate their sex) at three Lower Mainland (Vancouver) Universities and Community Colleges. The Undergraduates were tested in Summer Introductory Psychology and Criminology courses. The average age of the college students was 24 years ($SD = 6.6$). Complete data were available for 306 subjects. As there were no effects due to gender in the present study, there will be no further mention of gender.

*Materials*

A new test developed for this research measured four causal dimensions (locus of causality, personal control, external control, and stability) for each of six misfortunes. The new test (Appendix C) used a format that specifies a misfortune and then asks for an individual's responses to that misfortune. An example of one of the items and a couple of the causal rating scales are shown below.

1. Cancer.
One likely cause: _____

*Think about the reason you have written above. The items below concern your impressions or opinions of this cause of the person's misfortune. Circle one number for each of the following questions.*

*Is the cause something:*

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Inside the person | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Outside the person | |
| Manageable by the person | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Not Manageable by the person | |

The top phrase indicates the *type* of misfortune, in this case, cancer. In the instructions for the test, respondents were asked to "think about how such a thing could likely happen to someone (other than yourself) and then write down one plausible (likely) reason that comes to mind". Respondents were then to rate the generated cause on 12 semantic differential scales. The 12 rating scales purportedly measured four causal dimensions, namely, locus of control (3 scales), personal control (3 scales), external control (3 scales), and stability (3 scales). As shown above, the scales were in 9-point form, with higher scores representing more internal, personally controllable, externally controllable, and stable causes.

As can be seen in the examples above, the rating scales were bipolar and thus anchored at either end by phrases describing the causal dimension being measured. For example, an individual rates the degree of *internality* that a cause of a misfortune elicits by circling one number from the first scale above. One side of the rating item is associated with internal locus of control (at the "9" end of the scale), the other side with external locus of control (at the "1" end of the scale). All three locus rating scales have the same character. Similarly, an individual rates the degree of *personal control* that a cause of a misfortune elicits by circling one number from the second scale above. One side of the rating item is associated with

personal control (at the "9" end of the scale), and the other side with lack of personal control (at the "1" end of the scale). All three personal control rating scales have the same character.

*Procedure*

Subjects were tested in classroom groups of approximately 10 to 30 people. The study was described as an investigation of people's thoughts about negative events. The tester referred to the new test as the "Reasons for Misfortune" questionnaire, the title printed on the front page of the test (see Appendix C). Respondents were asked to read the instructions silently and completely before starting the test, and then to proceed at their own pace. There was no time limit, but most subjects completed the test within 20 minutes.

The instructions for the test asked respondents to indicate, for each of six misfortunes, a likely cause for a misfortune, and then to rate that cause by circling one number on each of the twelve scales provided. The instructions asked the respondent to focus on the generated cause (rather than on the problem/misfortune) when doing the ratings, and defined the meaning of two terms in the rating scales, i.e., "the person", which referred to "the person who has the problem", and "other people", which referred to "anyone other than the person with the problem".

**Results and Discussion**

*Descriptive data*

An examination of causal ascriptions revealed that a large proportion of subjects cited unusual causes for one of the misfortunes on the new test. The unusual causes pointed to a misinterpretation of the misfortune by those subjects, and their responses to that item were scored as "missing" for the present analyses.

Specifically, an analysis of the patterns of missing data revealed that 7% of subjects in the current sample mistook the "Friend*less*ness" item as "Friend*li*ness", although the test assessed "Reasons for Misfortune". The "Friendlessness" item was the fifth (second-last) item on the test. Perhaps the 25 subjects who misread the item were relieved to "find" one positive outcome on the test.

The means and standard deviations for the causal dimension subscales are presented in Table 2.

*Reliability*

Coefficient alpha (Cronbach & Meehl, 1955) reliabilities (Table 2) of the test's causal dimension subscales were calculated separately for each misfortune, then averaged. The internal consistencies of the dimension subscales were surprisingly good, given that the subscales were each comprised of only 3 items. The obtained reliabilities compared well to results of other attributional style studies (e.g., Anderson, 1985). For example, Anderson and Riger (1991) reported the following coefficient alpha reliabilities for the ASAT-IV: .56 (locus), .57 (controllability), .63 (stability). The obtained reliabilities were also in the range of those reported by McAulay et al. (1991), mentioned above, in their examination of the CDSII.

Table 2

*Mean causal dimension subscale scores: Study 2*

| Misfortune | | | Causal Dimension | | |
|---|---|---|---|---|---|
| | | Locus | Personal Control | External Control | Stability |
| Cancer | Mean | 18.18 | 17.29 | 11.09 | 13.69 |
| | SD | 5.49 | 7.61 | 5.95 | 5.49 |
| | N | 354 | 354 | 354 | 355 |
| | alpha | .50 | .89 | .77 | .62 |
| Divorce | Mean | 19.84 | 20.38 | 12.42 | 12.44 |
| | SD | 4.66 | 5.30 | 5.90 | 5.33 |
| | N | 353 | 353 | 351 | 352 |
| | alpha | .57 | .80 | .77 | .65 |
| Bankruptcy | Mean | 17.96 | 19.87 | 14.07 | 10.49 |
| | SD | 6.30 | 5.97 | 5.97 | 4.69 |
| | N | 347 | 347 | 347 | 347 |
| | alpha | .81 | .86 | .80 | .60 |
| Facial Disfigurement | Mean | 11.34 | 9.83 | 12.95 | 16.02 |
| | SD | 5.77 | 6.12 | 6.66 | 6.22 |
| | N | 335 | 336 | 334 | 336 |
| | alpha | .61 | .78 | .81 | .63 |
| Friendlessness | Mean | 22.01 | 20.69 | 12.32 | 12.27 |
| | SD | 5.21 | 5.72 | 6.16 | 5.26 |
| | N | 323 | 323 | 322 | 323 |
| | alpha | .77 | .84 | .84 | .72 |
| Loss of all Possessions | Mean | 11.82 | 12.98 | 13.22 | 12.36 |
| | SD | 6.85 | 7.40 | 6.85 | 5.83 |
| | N | 336 | 337 | 337 | 337 |
| | alpha | .81 | .88 | .86 | .58 |
| COMBINED (18 scales) | Mean | 101.07 | 100.14 | 75.34 | 77.09 |
| | SD | 17.10 | 18.58 | 21.27 | 17.45 |
| | N | 306 | 306 | 306 | 306 |
| | average alpha | .67 | .84 | .80 | .63 |

*Separability of the causal dimensions*

One validity consideration with regard to the new AS test had to do with the separability of the causal dimensions for each misfortune. That is, did the new test measure the four causal-attributional dimensions for each misfortune as it was expected to?

To address this question, the rating items for the causal dimensions subscales were factored in a separate analysis for each misfortune. Initial extraction was by the method of principal components, and then varimax rotation was used to achieve simple structure of the factors to be extracted. Factor loadings equal to or greater than .30 identified salient items. In each analysis, the number of factors was determined by a scree test (Cattell, 1966) of the eigenvalues of the unaltered correlation matrix. According to Cattell (1966), factor cutoff for component analysis should be at the spot where the incremental differences between consecutive factors become negligible. This rule was applied in the components analyses reported below.

The scree tests for factor cutoff and results of the principal components analyses for each of the misfortunes are reported in Appendix D. As shown in the tables in that Appendix, in two of the analyses, four factors were extracted that clearly corresponded to the four causal dimensions. That is, for the "Divorce" and "Friendlessness" misfortunes, four sets of three items had high loadings on one factor and relatively low loadings on any of the other factors. On the basis of the content of the 3 items with high loadings on each factor, the factors were labelled "Locus" (LC), "Personal Control" (PC), "External Control" (EC), and "Stability" (ST).

For the "Cancer" misfortune, a similar, 4-factor picture emerged, but there was a less than perfect correspondence of the extracted factors to the causal dimensions. The 3 "personal control" items had quite high loadings on the first

factor and relatively low loadings on any of the other factors. Thus, Factor 1 was labelled "Personal Control". However, as can be seen in the relevant table in Appendix D, one of the "locus" items and one of the "stability" items had a moderately high loading on the first factor, and on the third and fourth factors, respectively. Thus, the "Personal Control" factor (Factor 1) for "Cancer" is not as clearly outlined as for the two misfortunes outlined above. However, similar to the above misfortunes, the 3 "external control" items for "Cancer" had high loadings only on the second factor, and that factor was labelled "External Control". Finally, the 3 "locus" items and the 3 "stability" items had moderate to high loadings on the third and fourth factors, respectively. Thus, for the "Cancer" outcome, Factor 3 was labelled "Locus", and Factor 4 was labelled "Stability".

In two other analyses, three factors were extracted that corresponded somewhat less well to the expected causal dimensions. That is, for the "Bankruptcy" and "Facial Disfigurement" misfortunes, the 3 "locus" items and the 3 "personal control" items had high loadings on the first factor and relatively low loadings on any of the other factors. Thus, Factor 1 was labelled "Locus / Personal Control". For these misfortunes (Bankruptcy, Facial Disfigurement), the 3 "external control" items had high loadings only on the second factor, and the 3 "stability" items had high loadings only on the third factor. Thus, Factors 2 and 3 were labelled "External Control", and "Stability", respectively.

Finally, four factors were extracted for the "Loss of all Possessions" misfortune, two of which were identical to those extracted for "Bankruptcy" and "Facial Disfigurement" above. That is, for the "Loss" misfortune, the 3 "locus" items and the 3 "personal control" items had high loadings on the first factor, and Factor 1 was labelled "Locus / Personal Control". Further, the 3 "external control" items had high loadings only on the second factor, and that factor was labelled "External

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Control". However, only 2 of the "stability" items had high loadings on the third factor, and the other "stability" item loaded by itself on the fourth factor. Thus, Factor 3 was labelled "Stability-1", and the fourth factor was labelled "Stability-2".

In summary, the principal components analyses in the present study confirmed that four causal dimensions were being measured for three of the misfortunes on the test; i.e., that four factors were extracted that corresponded to the four causal dimensions being investigated for the "Cancer", "Divorce", and "Friendlessness" outcomes. In other words, the discriminant validity of the causal subscales was adequate for these three misfortunes. For the three other outcomes on the new test ("Bankruptcy", "Facial Disfigurement", and "Loss of all Possessions"), two of the causal dimensions (external control, stability) showed fair to good discriminability, but the dimensions central to the present investigation (locus and personal control) showed low discriminability. That is, for half of the misfortunes on the new test, the two central dimensions collapsed into one dimension. The fact that the personal control and locus dimensions collapse in half the situations, as they have in the present study, emphasizes the point that there is no *a priori* reason why the two dimensions should always be separable empirically. Indeed, it is likely there are classes of misfortunes for which the only plausible (and/or available) causes involve the collapse of the locus and personal control dimensions into one dimension. For example, natural disasters are external and largely uncontrollable by individuals.

*Relationships between the causal dimensions*

A related issue concerned the relationships between the causal subscales for each of the misfortunes. That is, were there meaningful patterns among the causal dimensions for each misfortune? An examination the intercorrelations of the causal

subscales (Table 3) indicated that there were significant correlations among the dimensions within a misfortune. That is, for all of the misfortunes, locus correlated positively with personal control; average $r = .48$. Thus, if a cause was perceived to be internal, it was usually also perceived to be controllable by the victim. Also, for all but two of the misfortunes, personal control and stability were negatively correlated; average $r = -.30$. That is, if a cause was perceived to be controllable, it was usually also perceived to be unstable. In addition, for all but one of the misfortunes, locus was negatively correlated with external control; average $r = -.29$. Thus, if a cause was perceived to be internal, it was usually also perceived to be uncontrollable by external forces/agents. These patterns of significant correlations among the causal subscales were consistent with the results of McAulay et al. (1991). In their work on the CDSII, McAulay et al. (1991) reported correlations of .71 between locus and personal control; -.32 between personal control and stability; -.64 between locus and external control.

McAulay et al. (1991) also reported a significant correlation of -.55 between personal control and external control subscales. In the present investigation, the correlations between personal control and external control subscales showed some situational specificity. Similar to the McAulay et al. (1991) study, for two of the misfortunes ("Bankruptcy" and "Friendlessness"), personal control and external control were negatively correlated; average $r = -.25$. That is, if a cause was perceived to be personally controllable, it was also perceived to be uncontrollable by external agents/forces. But for two other misfortunes ("Facial Disfigurement" and "Loss of all Possessions"), personal control and external control were positively correlated; average $r = .22$. That is, if a cause was perceived to be personally *uncontrollable*, it was also perceived to be uncontrollable by external agents/forces (thus, uncontrollable by anyone). Both of these correlations make intuitive sense.

Table 3

*Intercorrelations of causal dimension subscales: Study 2 (N = 306)*

| | | Cancer | | | | Divorce | | | | Bankruptcy | | | | Facial Disfigurement | | | | Friendlessness | | | | Loss of All Possessions | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | LC | PC | EC | ST | LC | PC | EC | ST | LC | PC | EC | ST | LC | PC | EC | ST | LC | PC | EC | ST | LC | PC | EC | ST |
| Cancer | LC | 100 | | | | | | | | | | | | | | | | | | | | | | | |
| | PC | **27** | 100 | | | | | | | | | | | | | | | | | | | | | | |
| | EC | **-31** | -05 | 100 | | | | | | | | | | | | | | | | | | | | | |
| | ST | -04 | **-44** | 01 | 100 | | | | | | | | | | | | | | | | | | | | |
| Divorce | LC | 04 | 01 | -01 | 10 | 100 | | | | | | | | | | | | | | | | | | | |
| | PC | -02 | 01 | 02 | 09 | **30** | 100 | | | | | | | | | | | | | | | | | | |
| | EC | -05 | -10 | **21** | 11 | **-24** | 01 | 100 | | | | | | | | | | | | | | | | | |
| | ST | 01 | 01 | 04 | 11 | 07 | **-28** | -14 | 100 | | | | | | | | | | | | | | | | |
| Bankruptcy | LC | 11 | 07 | -00 | -01 | **18** | **16** | 01 | -06 | 100 | | | | | | | | | | | | | | | |
| | PC | 06 | 09 | -00 | -05 | 09 | 12 | 03 | -11 | **68** | 100 | | | | | | | | | | | | | | |
| | EC | -04 | -04 | **18** | 03 | 02 | 00 | **24** | 07 | **-36** | **-26** | 100 | | | | | | | | | | | | | |
| | ST | 03 | -05 | 10 | **24** | 02 | 01 | 09 | **25** | 10 | -07 | 05 | 100 | | | | | | | | | | | | |
| Facial Disfigurement | LC | 10 | -02 | -02 | 03 | -01 | -09 | 05 | 06 | 09 | 02 | -01 | **18** | 100 | | | | | | | | | | | |
| | PC | 09 | 03 | 08 | -00 | -01 | 03 | 05 | -04 | -01 | 04 | -02 | 04 | **38** | 100 | | | | | | | | | | |
| | EC | 02 | -12 | 11 | 06 | 01 | 09 | **15** | -01 | -06 | -02 | **15** | 00 | -15 | **20** | 100 | | | | | | | | | |
| | ST | 02 | 01 | -11 | **24** | 06 | -07 | -04 | 07 | 00 | -01 | 05 | 03 | 09 | **-26** | **-20** | 100 | | | | | | | | |
| Friendlessness | LC | **19** | 05 | -11 | -08 | 09 | 07 | -01 | -11 | **19** | 00 | 04 | -11 | 02 | 05 | -04 | 02 | 100 | | | | | | | |
| | PC | 02 | 03 | -06 | -06 | -04 | 11 | 08 | -14 | 00 | **20** | 06 | **-20** | -04 | 08 | -00 | 01 | **57** | 100 | | | | | | |
| | EC | -04 | -09 | **23** | 08 | -03 | -02 | **18** | 08 | 04 | 06 | 12 | 03 | 04 | 02 | 08 | 01 | **-41** | **-24** | 100 | | | | | |
| | ST | -01 | -06 | 10 | **14** | 03 | -09 | -01 | **29** | 02 | -13 | 10 | **36** | **18** | 15 | 03 | -00 | 06 | **-23** | -00 | 100 | | | | |
| Loss of All Possessions | LC | 07 | -01 | 10 | 06 | 05 | -02 | 10 | -01 | 00 | -06 | 04 | 14 | **19** | **17** | 02 | -04 | 01 | -03 | 00 | 14 | 100 | | | |
| | PC | 02 | -01 | 11 | 10 | 07 | 06 | 10 | -03 | 01 | -00 | 07 | 12 | 06 | **30** | 13 | -07 | 02 | 05 | -03 | 15 | **69** | 100 | | |
| | EC | 01 | -08 | 10 | 06 | 01 | 04 | **20** | 05 | 00 | -00 | **18** | 06 | 01 | **19** | **37** | -08 | -06 | -02 | 14 | 07 | -04 | **25** | 100 | |
| | ST | 06 | 01 | -05 | 05 | -01 | -05 | -03 | 10 | -08 | -01 | 05 | 14 | 07 | 01 | 08 | **18** | 00 | -02 | 00 | 10 | 04 | -07 | 03 | 100 |

Note: Decimals omitted. Bold-face values are significant at p < .001

LC=Locus of Causality     EC=External Control
PC=Personal Control     ST=Stability

Finally, McAulay et al. (1991) also reported a small but significant correlation of .15 between stability and external control. In the present study, small but significant correlations also were found between stability and external control for two of the misfortunes ("Divorce" and "Facial Disfigurement"). However, in contrast to the McAulay et al. (1991) datum, for each of these two misfortunes, the correlation between external control and stability was negative. That is, if a cause was perceived to be stable, it was also perceived to be uncontrollable by external agents/forces. This relation makes intuitive sense for the "Facial Disfigurement" problem (e.g., some genetic cause), but is less clear in the case of "Divorce".

In summary, the causal dimension subscales for the new test showed good reliability and, in general, theoretically expected correlations among the causal dimensions for each of the misfortunes were found. Further, for half the misfortunes on the new test, the present findings indicated good discriminant validity of the four causal dimensions it purportedly measures. However, the discriminability of the locus and personal control dimensions was low for the other half of the misfortunes on the test, which emphasized the point that while empirical separability of causal dimensions may not always occur, that does not in itself invalidate conceptual separability of the dimensions.

*Situation-specificity versus generality of the new construct*

The main validity consideration in the present investigation had to do with the situation-specificity or generality of the new AS construct. The test allowed for either outcome. Thus, the question was to what degree, if any, causal subscales would show that subjects were discriminating between the different types of misfortunes. Intercorrelations among all the causal dimension subscales are shown in Table 3. However, for simplicity, I have included in a separate table (Table 4) the

cross-situational consistency coefficients that are crucial to the present investigation. In Table 4, those coefficients are contained in the outlined triangles. Examination of the intercorrelations in Table 4 indicated that 20% (6/30) of the cross-situational consistency coefficients were statistically significant, which is well above chance.

Although none of these significant correlations reached very high levels (e.g., the largest correlation was .30), their pattern showed some organization. For example, perceptions of the locus and personal controllability of "Loss of all Possessions" correlated positively with those same perceptions of "Facial Disfigurement"; $r = .19$, $p < .01$ for locus, $r = .30$, $p < .001$ for personal control. In other words, there was a slight tendency for subjects in the present study to perceive the causes of both misfortunes in the same way. An examination of the means in Table 2 indicated that subjects judged these two misfortunes to be ·relatively uncontrollable by the victim.

Further, perceptions of the locus and personal controllability of "Bankruptcy" correlated positively with those same perceptions of "Friendlessness"; $r = .19$, $p < .01$ for locus, $r = .20$, $p < .01$ for personal control. That is, subjects in the present study showed a slight tendency to perceive these two misfortunes in similar ways. An examination of means in Table 2 indicated that subjects judged both misfortunes to be relatively controllable by the victim.

However, as can be seen in Table 4, overall, the obtained correlations were quite small. The average cross-situational consistency coefficient was only .08 for locus and .07 for personal control. Thus, there was also substantial discriminativeness in causal perceptions of others' misfortunes. Stated in the converse, there was little evidence of *broad* cross-situational consistency in causal attributions about others' misfortunes.

Table 4

*Intercorrelations of locus and personal control causal dimension subscales: Study 2*

*(N = 306)*

|  |  | Locus Scales Misfortune | | | | | | Personal Control Scales Misfortune | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  |  | 1 | 2 | 3 | 4 | 5 | 6 | 1 | 2 | 3 | 4 | 5 | 6 |
| Locus Scales | 1 | 100 | | | | | | | | | | | |
|  | 2 | 04 | 100 | | | | | | | | | | |
|  | 3 | 11 | **18** | 100 | | | | | | | | | |
|  | 4 | 10 | -01 | 09 | 100 | | | | | | | | |
|  | 5 | **19** | 09 | **19** | 02 | 100 | | | | | | | |
|  | 6 | 07 | 05 | 00 | **19** | 01 | 100 | | | | | | |
| Personal Control Scales | 1 | **27** | 01 | 07 | -02 | 05 | -01 | 100 | | | | | |
|  | 2 | -02 | **30** | 16 | -09 | 07 | -02 | 01 | 100 | | | | |
|  | 3 | 06 | 09 | **68** | 02 | **16** | -06 | 09 | 12 | 100 | | | |
|  | 4 | 09 | -01 | -01 | **38** | 05 | **17** | 03 | 03 | 04 | 100 | | |
|  | 5 | 02 | -04 | 00 | -04 | **57** | -03 | 03 | 11 | **20** | 08 | 100 | |
|  | 6 | 02 | 07 | 01 | 06 | 02 | **69** | -01 | 06 | -00 | **30** | 05 | 100 |

Note: Decimals omitted. Bold-face values are significant at p < .01

1 = Cancer; 2 = Divorce; 3 = Bankruptcy;
4 = Facial Disfigurement; 5 = Friendlessness;
6 = Loss of all possessions

However, the discriminativeness indicated by the data does not mean attributions about others' misfortunes were completely random. In addition to the patterns of significant correlations outlined above, 13/15, or 86% of the locus cross-situational consistency coefficients were positive. The same proportion of personal control cross-situational consistency coefficients were positive. Neither of the remaining negative coefficients in either case reached statistical significance. Thus, the present analysis indicated there was a good deal of discriminativeness in causal perceptions of others' misfortunes. However, there was also evidence of some organization in the present data; that is, a positive but weak tendency consistent with the notion of an attributional "style".

A more detailed, principal components analysis was used to examine the situation-specificity vs. generality of the new construct. The principal components analysis was conducted on the 24 causal dimension subscale scores whose intercorrelations were presented in Table 3, above; i.e., on the four causal dimension subscale scores (locus, personal control, external control, and stability) computed for each of the six misfortunes. Those subscale scores were factored in an overall analysis of the six-misfortune test. Initial extraction was by the method of principal components, and then varimax rotation was used to achieve simple structure of the factors to be extracted. Factor loadings equal to or greater than .30 identified salient items. As in the components analyses described above, the number of factors was determined by a scree test (Cattell, 1966) of the eigenvalues of the unaltered correlation matrix. In the present analysis, factor cutoff was made where the incremental differences between consecutive factors became negligible (Cattell, 1966).

The scree test for factor cutoff and results of the principal components analysis of the new test are reported in Appendix E. As shown in that appendix, ten

factors were extracted in the analysis. Most of the factors were comprised of one set of two items. Each factor was labelled (see appendix) according to the content of the items which showed high loadings on that factor. The factors extracted from people's responses to the test items were quite specific to the situation; i.e., "disasterosity" factors, that largely reflected expected within-misfortune correlations among the causal dimensions (see discussion above). Thus, in the present study, the principal components analysis of the factor structure of the new test provided no support for the notion of a broad cross-situational consistency in controllability attributions, but instead indicated there was a good deal of discriminativeness in causal perceptions of others' misfortunes.

In summary, there was little evidence in the present study of any broad cross-situational consistency in people's causal perceptions of the misfortunes assessed by the new test. Although the data showed some organization (a positive tendency) that suggested the weak presence of an attributional "style", there was also evidence of a good deal of discriminativeness in causal perceptions about others' misfortunes, which questions the notion of a cognitive "style".

An attempt was made to replicate the present findings in a second study that evaluated the new AS construct and examined some of its potential correlates. That analysis (Study 3), conducted on a new subject sample, is reported in the next chapter.

## CHAPTER III

## TEST DEVELOPMENT AND EVALUATION: 2

Study 2 provided only weak evidence of a tendency to make cross-situationally consistent attributions about the causes of others' misfortunes, which suggested that no such tendency exists. In another study (described below), an attempt was made to replicate these findings. However, assuming the AS concept has some validity in the present domain (person perception), it seemed important at this point to consider an issue that has been raised regarding AS investigations in general. That is, attributional style has been conceptualized as a "trait", yet it has been argued that the nomological networks of various attributional styles have not been given very careful consideration (e.g., Mitchell, 1989; Sanderman, 1986).

Most AS studies have focused on relationships between attributional styles and depression, self-esteem, or loneliness (e.g., Alloy et al., 1988; Anderson et al,. 1988; Peterson et al., 1982). Only a handful of studies have examined relationships between AS and other trait dimensions (e.g., Mitchell, 1989; Nezu, Nezu, & Nezu, 1986). In some of those studies, the reported correlations between AS and other personality dimensions have not been impressively high, and the hit rate for accurate predictions has been marginal. For example, Mitchell (1989) reported correlations ranging from -.01 and -.24 ($M = .07$) between attributional styles for negative events, as measured by the ASQ (Peterson et al., 1982), and selected trait dimensions, as measured by the Comrey Personality Scales (Comrey, 1970). In Mitchell's (1989) study, twenty percent of the predicted correlations (i.e., 3/15) between selected trait dimensions and AS for negative events were statistically significant. However, 33% of the non-predicted correlations (i.e., 3/9) between

personality traits and AS for negative events were also statistically significant (Mitchell, 1989).[1]

On the other hand, in some studies, the reported correlations between AS and other personality dimensions have been high and have posed a challenge to traditional theory. For instance, Nezu et al. (1986) reported significant relationships between AS (as measured by the ASQ) and "trait anxiety", and between AS and "assertiveness". In addition to these findings, the authors reported that AS was significanly correlated with several other variables, including "depression", "state anxiety", and "psychosomatic complaints".[2] Nezu et al. (1986) were testing an assertion made by Gotlib (1984) that "had ..(other) measures been used instead of the BDI [Beck Depression Inventory], learned helplessness might originally have been postulated as a model of anxiety or unassertiveness" (p. 26). According to Nezu et al., the fact that AS correlated significantly with several forms of psychological distress, in addition to "depression", confirmed Gotlib's (1984) assertion, and pointed to serious questions about the specificity of the causal attribution model to depression (as suggested by the reformulated learned helplessness theory). Nezu et al. (1986) suggested that the interrelationships between causal ascriptions (for stressful events), depression, anxiety, and assertiveness must be explored if adequate theory-building and testing is to take place in this domain.

In summary, despite over a decade of research on purported "trait" constructs (attributional styles), their nomological networks have received little attention. Some of the data relating to the question of AS nomological networks appear to be mixed, and some of the data suggest important changes to traditional theory. Therefore, it seems crucial to examine the broader implications of AS (if any) to other personality dimensions.

As part of the critical evaluation of a new AS construct in a new domain (person perception), I thus examined relationships between controllability AS for others' misfortunes, as operationalized by the new AS test, and selected trait dimensions. In Study 3, described below, I examined relationships between controllability AS for others' misfortunes and three personality dimensions I proposed were part of the new construct's nomological network. I also examined relationships between controllability AS and two personality dimensions I proposed were not part of the new construct's nomological network. The five trait dimensions selected for the present analysis were among those purportedly measured by the Personality Research Form (Jackson, 1989), described by Anastasi (1988) as an "excellent research instrument" (p. 548). The PRF trait dimensions selected for the present study are outlined in Table 5 and discussed briefly below.

In Table 5, the PRF scale corresponding to a relevant trait dimension is named, followed by a description of a high scorer on the scale and the hypothesized relationship of the trait dimension to controllability attributional style for others' misfortunes.

These trait dimensions are not, of course, an exhaustive list of variables that might conceiveably be within or outside of the nomological network of controllability AS for others' misfortunes. Appendix F contains descriptions of other potentially related and unrelated variables.

*Nurturance*

Nurturant persons are described in the PRF manual (Jackson, 1989) as "sympathetic, paternal, helpful, benevolent, enouraging, caring, protective, comforting, maternal, supporting, aiding, ministering, consoling, charitable, assisting" (Jackson, 1989, p. 7). It was hypothesized that it would be *unlikely* for

Nurturant persons to have a controllability attributional style for others' misfortunes; such an AS would be inconsistent with their tendency to be helpful, caring people. Considering that aid is thought to be a result of an attribution (uncontrollability) - emotion (pity) - action (aid) path (Weiner, 1986), it seemed plausible to expect that the relationship (if any) between Nurturance and controllability AS for others' misfortunes would be negative.

*Dominance*

Dominant persons are described in the PRF manual (Jackson, 1989) as "governing, controlling, commanding, domineering, influential, persuasive, forceful, ascendant, leading, directing, dominant, assertive, authoritative, powerful, supervising" (Jackson, 1989, p. 6). It was hypothesized that the "control" aspect of dominance would link it positively to controllability attributional style for others' misfortunes; i.e., that dominant people would be likely to perceive control over their own and possibly others' outcomes that "isn't there" (e.g., Burger, 1985; Burger & Cooper, 1979; Langer, 1975).

*Aggression*

Aggressive persons are described in the PRF manual (Jackson, 1989) as "quarrelsome, irritable, argumentative, threatening, attacking, antagonistic, pushy, hot-tempered, easily-angered, hostile, revengeful, belligerent, blunt, retaliative" (Jackson, 1989, p. 6). It was hypothesized that aggressive persons might explain others' misfortunes by citing internal, controllable causes more frequently than non-aggressive persons, perhaps in order to justify attacks they might make toward victims (cf. Altemeyer, 1981, 1988).

*Change*

The PRF manual (Jackson, 1989) describes persons high in Change as "inconsistent, fickle, flexible, unpredictable, wavering, mutable, adaptable, changeable, irregular, variable, capricious, innovative, flighty, vascillating, inconstant" (Jackson, 1989, p. 6). It was hypothesized that these individuals would not likely have any attributional "style", but rather would tend to explain events haphazardly. Thus, it was expected that knowing something about a person's level of Change would say nothing about her/his level of controllability attributional style for others' misfortunes.


*Impulsivity*

The PRF manual (Jackson, 1989) describes Impulsive persons as "hasty, rash, uninhibited, spontaneous, reckless, irrepressible, quick-thinking, mercurial, impatient, incautious, hurried, impulsive, foolhardy, excitable, impetuous" (Jackson, 1989, p. 7). It was hypothesized that the "mercurial", spontaneous thinking that is thought to characterize Impulsive persons is inconsistent with the concept of a "cognitive style", both for one's own life events and for others'. Thus, it was not expected that Impulsivity would be reliably related to controllability attributional style for others' misfortunes.

Table 5

*Personality (trait) dimensions thought to be related to controllability attributional style for others' misfortunes (CASOM)*

| Scale | Description of a High Scorer | Relation to CASOM |
|---|---|---|
| Nurturance (Jackson, 1989) | A person high in nurturance gives sympathy and comfort (to others); assists others whenever possible; interested in caring for children, the disabled, or the infirm; offers a "helping hand" to those in need; readily performs favors for others | Negative |
| Dominance (Jackson, 1989) | A person high in dominance tries to control environment, and to influence or direct other people; expresses opinions forcefully; enjoys the role of leader and may spontaneously assume it | Positive |
| Aggression (Jackson, 1989) | A person high in aggression enjoys combat and argument; easily annoyed; sometimes willing to hurt people to get own way; may seek to "get even" with people perceived as causing harm | Positive |
| Change (Jackson, 1989) | A person high in Change likes new and different experiences; dislikes routine and avoids it; may readily change opinions or values in different circumstances; adapts readily to changes in environment | Unrelated |
| Impulsivity (Jackson, 1989) | A person high in Impulsivity tends to act on the "spur of the moment" and without deliberation; gives vent readily to feelings and wishes; speakes freely; may be volatile in emotional expression | Unrelated |

# Study 3: Test and Nomological Network Evaluation

The purpose of Study 3 was to replicate the results of Study 2 with a new subject sample, and to examine aspects of the hypothesized nomological network of the new AS construct, by examining correlations between controllability attributional style for others' misfortunes and selected trait dimensions.

## Method

*Subjects*

Subjects were 207 undergraduate student volunteers from two Lower Mainland University and College campuses. Approximately 50% of the subjects were students in Introductory Psychology classes at Simon Fraser University (SFU) who received course credit for participating in the study. The other 50% of the subjects were volunteers from other Summer courses at SFU and Douglas College. The average age of the subjects was 24.02 years ($SD = 7.83$). Complete data were available for 200 subjects. As in Study 2, there were no effects due to gender in the present study; thus, gender will not be mentioned further.

*Materials*

The five traits hypothesized to be related and unrelated to controllability attributional style for others' misfortunes were measured by the Personality Research Form, or PRF (Jackson, 1974, 1989). The PRF is a self-report personality inventory that purportedly measures 20 trait dimensions which were based on Murray's (1938) personality theory. In the present study, subjects were presented with Form E of the PRF, the standard form, consisting of 352 items, and the six-misfortune AS test which was developed for use in Study 2. Due to the high number of misses on the new AS test for the "Friendlessness" item in Study 2, it was

changed to "Has no Friends" for the present study. Otherwise the instrument was identical to that used in Study 2.

*Procedure*

Subjects were tested in classroom groups of approximately 2 to 10 people. Order of presentation of the PRF-E and the new AS test were counterbalanced so that half of the subjects were asked to complete the PRF-E first, and the other half the AS test first. As there was no effect due to order of presentation, it will not be mentioned further. The tester asked respondents to read the instructions silently and completely before starting each test, and then to proceed at their own pace. There was no time limit, and most subjects completed the two tests within 1 hour (45 minutes for the PRF-E, 15 minutes for the AS test). To prevent distractions, order of presentation of the questionnaires was the same for all subjects in a testing session.

## Results and Discussion

*Descriptive data*

The means and standard deviations for the causal dimension subscales are presented in Table 6. Table 7 shows mean scores on PRF-E trait dimensions for subjects in the present study, and included for comparison are mean scores on those same dimensions for a variety of subject samples reported by Jackson (1989).

*Reliability*

Coefficient alpha (Cronbach & Meehl, 1955) reliabilities (Table 6) of the new test's causal dimension subscales were calculated separately for each misfortune, then averaged. As in Study 2, the internal consistencies of the dimension subscales

were surprisingly good, given that the subscales were each comprised of only 3 items. Again, the obtained reliabilities compared well to results of other attributional style studies (e.g., Anderson, 1985; Anderson & Riger (1991), and were in the same range as the reliabilities reported by McAulay et al. (1991) in their examination of the CDSII.

*Separability of the causal dimensions*

As in Study 2, one validity consideration had to do with the separability of the causal dimensions for each misfortune. To address this question, the rating items for the causal dimensions subscales were factored in a separate analysis for each misfortune. Initial extraction was by the principal components method, and then varimax rotation was used to achieve simple structure of the factors to be extracted. Factor loadings equal to or greater than .30 identified salient items. As in Study 2, in each analysis, the number of factors were determined by a scree test (Cattell, 1966) of the eigenvalues of the unaltered correlation matrix. Factor cutoff was made where the incremental differences between consecutive factors became negligible (Cattell, 1966).

The scree tests for factor cutoff and results of the principal components analyses of the misfortunes on the test are reported in Appendix G. The results of the present analyses were almost identical to those reported in Study 2. As shown in the tables in Appendix G, in two of the analyses, four factors were extracted that clearly corresponded to the four causal dimensions. That is, for the "Divorce" and "Friendlessness" misfortunes, four sets of three items had high loadings on one factor and relatively low loadings on any of the other factors. On the basis of the content of the 3 items with high loadings on each factor, the factors were labelled "Locus" (LC), "Personal Control" (PC), "External Control" (EC), and "Stability" (ST).

Table 6

*Mean causal dimension subscale scores: Study 3*

| Misfortune | | | Causal Dimension | | |
|---|---|---|---|---|---|
| | | Locus | Personal Control | External Control | Stability |
| Cancer | Mean | 19.17 | 19.29 | 9.79 | 13.06 |
| | SD | 5.30 | 7.62 | 5.64 | 5.37 |
| | N | 200 | 200 | 200 | 200 |
| | alpha | .51 | .91 | .78 | .50 |
| Divorce | Mean | 20.25 | 20.33 | 11.21 | 11.70 |
| | SD | 4.68 | 5.54 | 5.83 | 5.07 |
| | N | 200 | 200 | 200 | 200 |
| | alpha | .59 | .81 | .82 | .67 |
| Bankruptcy | Mean | 17.04 | 19.70 | 14.82 | 10.30 |
| | SD | 6.47 | 6.32 | 6.20 | 4.87 |
| | N | 200 | 200 | 200 | 200 |
| | alpha | .83 | .90 | .85 | .61 |
| Facial Disfigurement | Mean | 10.08 | 9.59 | 13.69 | 16.24 |
| | SD | 5.45 | 6.14 | 6.88 | 6.58 |
| | N | 200 | 200 | 200 | 200 |
| | alpha | .64 | .82 | .82 | .63 |
| Friendlessness | Mean | 23.33 | 21.80 | 11.00 | 11.07 |
| | SD | 4.78 | 5.25 | 5.78 | 4.78 |
| | N | 200 | 200 | 200 | 200 |
| | alpha | .84 | .86 | .84 | .72 |
| Loss of all Possessions | Mean | 10.61 | 12.00 | 13.48 | 13.16 |
| | SD | 7.09 | 7.44 | 7.03 | 5.91 |
| | N | 200 | 200 | 200 | 200 |
| | alpha | .88 | .90 | .86 | .53 |
| COMBINED (18 scales) | Mean | 100.51 | 102.75 | 74.02 | 75.56 |
| | SD | 15.01 | 15.76 | 18.95 | 16.42 |
| | N | 200 | 200 | 200 | 200 |
| | average alpha | .71 | .87 | .82 | .61 |

Table 7

*Mean scores on PRF-E self ratings: Study 3*

| PRF-E Scale | Study 3 Students (N = 200) | | Officer Candidates (N = 504) | | Air Traffic Control Officers (N = 55) | | Juvenile Offenders (N = 341) | |
|---|---|---|---|---|---|---|---|---|
| | Mean | SD | Mean | SD | Mean | SD | Mean | SD |
| Aggression | 8.40 | 3.31 | 6.65 | 2.96 | 8.04 | 3.12 | 7.34 | 3.41 |
| Change | 8.78 | 2.88 | 10.30 | 2.48 | 9.07 | 2.57 | 8.92 | 2.66 |
| Dominance | 8.79 | 4.55 | 12.70 | 2.80 | 11.89 | 3.61 | 6.91 | 3.51 |
| Impulsivity | 6.47 | 3.61 | 3.88 | 3.04 | 5.35 | 3.78 | 6.00 | 3.49 |
| Nurturance | 10.25 | 3.07 | 9.60 | 3.13 | 8.15 | 3.27 | 9.52 | 3.13 |
| Abasement | 6.60 | 2.81 | 8.26 | 2.68 | 7.00 | 2.76 | 7.77 | 2.91 |
| Achievement | 9.90 | 3.26 | 12.60 | 2.64 | 11.09 | 3.05 | 9.33 | 3.00 |
| Affiliation | 8.57 | 3.76 | 10.35 | 3.28 | 9.91 | 3.55 | 9.78 | 3.30 |
| Autonomy | 7.72 | 3.41 | 6.48 | 3.08 | 6.87 | 3.36 | 7.18 | 3.31 |
| Cognitive Structure | 8.97 | 3.18 | 11.05 | 10.16 | 9.44 | 3.04 | 8.48 | 2.74 |
| Defendence | 7.27 | 3.52 | 4.98 | 3.20 | 5.76 | 2.94 | 6.61 | 3.33 |
| Endurance | 9.05 | 3.24 | 11.86 | 2.51 | 10.71 | 3.26 | 9.87 | 3.19 |
| Exhibition | 6.95 | 4.46 | 7.66 | 3.87 | 7.69 | 4.22 | 7.33 | 3.69 |
| Harmavoidance | 9.08 | 3.95 | 5.65 | 3.43 | 9.51 | 4.04 | 6.38 | 3.60 |
| Order | 8.01 | 4.26 | 11.03 | 4.03 | 10.00 | 4.50 | 9.65 | 3.97 |
| Play | 8.47 | 3.26 | 6.95 | 3.08 | 7.80 | 3.60 | 8.72 | 2.86 |
| Sentience | 9.26 | 3.22 | 7.49 | 3.14 | 6.13 | 3.14 | 6.81 | 2.84 |
| Social Recognition | 8.66 | 3.31 | 8.51 | 3.13 | 7.55 | 3.82 | 7.64 | 2.99 |
| Succorance | 7.73 | 3.63 | 5.88 | 3.29 | 4.33 | 3.51 | 6.77 | 3.53 |
| Understanding | 9.04 | 3.33 | 9.69 | 2.41 | 7.47 | 2.78 | 6.65 | 3.34 |
| Infrequency | .44 | 0.72 | .35 | .77 | .22 | .50 | 1.16 | 2.01 |
| Desirability | 10.29 | 3.03 | 12.42 | 2.38 | 12.38 | 2.59 | 9.14 | 3.24 |

Note: Officer candidates, air traffic officers, and juvenile offenders data are from Jackson (1989), and are included for comparison.

As in Study 2, there was a less than perfect correspondence of the extracted factors to the causal dimensions in the analysis of responses to the "Cancer" outcome. Unlike Study 2, five factors were extracted for this outcome in the present analysis. Similar to Study 2, the 3 "personal control" items had quite high loadings on the first factor and relatively low loadings on any of the other factors. However, two of the "stability" items also had moderately high loadings on the first factor and low loadings on any of the other factors. Thus, in contrast to findings in Study 2, Factor 1 was labelled "Personal Control / Stability". Similar to the "Divorce" and "Friendlessness" analyses above, and to findings in Study 2, the 3 "external control" items for the "Cancer" misfortune had high loadings on only the second factor, and that factor was labelled "External Control". Further, while two of the "locus" items had moderate loadings on the third factor, the remaining "stability" item was the only one with a high loading on the fourth factor. Thus, in contrast to Study 2, for the "Cancer" misfortune, Factor 3 was labelled "Locus-1", and Factor 4 was labelled "Stability-2". The remaining "locus" item was the only one to have a high loading on the fifth factor and a relatively low loading on any of the other factors. Therefore, Factor 5 was labelled "Locus-2".

For the "Bankruptcy" and "Facial Disfigurement" outcomes, the present findings were identical to those in Study 2. That is, for these two misfortunes, three factors were extracted that corresponded less well to the expected causal dimensions. The 3 "locus" items and the 3 "personal control" items had high loadings on the first factor and relatively low loadings on any of the other factors. Thus, Factor 1 was labelled "Locus / Personal Control". For these misfortunes ("Bankruptcy" and "Facial Disfigurement"), the 3 "external control" items had high loadings only on the second factor, and the 3 "stability" items had high loadings

only on the third factor. Thus, as in Study 2, Factors 2 and 3 were labelled "External Control", and "Stability", respectively.

Finally, the four factors extracted in the present analysis for the "Loss of all Possessions" misfortune were identical to those extracted in Study 2 for the "Loss" misfortune. That is, the 3 "locus" items and the 3 "personal control" items had high loadings on the first factor, and Factor 1 was labelled "Locus / Personal Control". Further, the 3 "external control" items had high loadings only on the second factor, and that factor was labelled "External Control". However, only 2 of the "stability" items had high loadings on the third factor, and the other "stability" item loaded by itself on the fourth factor. Thus, Factor 3 was labelled "Stability-1", and the fourth factor was labelled "Stability-2".

In summary, similar to findings in Study 2, the principal components analyses in the present study confirmed that four causal dimensions were being measured for two of the misfortunes on the test; i.e., that four factors were extracted that corresponded to the four causal dimensions being investigated for the "Divorce", and "Friendlessness" outcomes. In other words, the discriminant validity of the causal subscales was adequate for these two misfortunes. In contrast to Study 2, the present analysis of responses to the "Cancer" outcome revealed a somewhat confused picture of the correspondences between the causal dimension items. As in Study 2, the "external control" items for this outcome showed good correspondence and separability from the other items. However, there was a stronger correspondence (less separability) between the "personal control" and "stability" items in the present study for this outcome, and only two of the three "locus" items showed the expected correspondence.

For the three other outcomes on the new test ("Bankruptcy", "Facial Disfigurement", and "Loss of all Possessions"), the present findings were identical

to those in Study 2. That is, for these three misfortunes, two of the causal dimensions (external control, stability) showed fair to good discriminability, but the dimensions central to the present investigation (locus and personal control) showed low discriminability. Thus, as in Study 2, the two central dimensions collapsed into one dimension for half of the misfortunes on the new test. Again, the fact that the personal control and locus dimensions collapse in half the situations, as they have in both studies, amplifies the point that the two dimensions are not always separable empirically, nor is there any reason why the two should always show such separability. As mentioned earlier, it is likely there are classes of misfortunes for which the only plausible (and/or available) causes involve the collapse of the locus and personal control dimensions into one dimension.

*Relationships between the causal dimensions*

A related issue concerned the relationships between the causal subscales for each of the misfortunes; i.e., were there meaningful patterns among the causal dimensions for each misfortune? An examination the intercorrelations of the causal subscales (Table 8) indicated that there were significant correlations among the dimensions within a misfortune (i.e., correlation "clusters" on diagonal of Table 8). That is, for all of the misfortunes, locus correlated positively with personal control; average $r = .48$. In other words, if a cause was perceived to be internal, it was usually also perceived to be controllable by the victim. Further, for all of the misfortunes, personal control and stability were negatively correlated; average $r = -.34$. That is, if a cause was perceived to be controllable, it was usually also perceived to be unstable. In addition, for all but one of the misfortunes, locus was negatively correlated with external control; average $r = -.35$. In other words, if a cause was perceived to be internal, it was usually also perceived to be

uncontrollable by external forces/agents. These patterns of significant correlations among the causal subscales are consistent with the results of Study 2, and of McAulay et al. (1991), discussed earlier.

The weak positive correlation between locus and personal control for the "Divorce" item in the present study was inconsistent with earlier findings. The nature of divorce might have something to do with the low obtained correlation between locus and personal control in the present study. That is, several subjects in the present study related to me their indecisiveness about the causes of divorce; those subjects pointed out that, because divorce involves two others, it was difficult for them to locate the source of the cause. In contrast, none of the subjects in the earlier study (Study 2) reported any difficulty with locating the cause of divorce. Perhaps there were more people in the present study than in Study 2 for whom divorce was a salient issue (or vice versa).

As mentioned earlier, McAulay et al. (1991) also reported a significant negative correlation ($r$ = -.55) between personal control and external control subscales. In the present investigation, the correlations between personal control and external control subscales showed some situational specificity. Similar to the McAulay et al. (1991) study, and consistent with the results of Study 2, for two of the misfortunes ("Bankruptcy" and "Friendlessness"), personal control and external control were negatively correlated; average $r$ = -.26. That is, if a cause was perceived to be personally controllable, it was also perceived to be uncontrollable by external agents/forces. But for another misfortune ("Facial Disfigurement"), personal control and external control were positively correlated; $r$ = .20, $p$ < .01. That is, if a cause was perceived to be personally *uncontrollable*, it was also perceived to be uncontrollable by external agents/forces (thus, uncontrollable by anyone). Both of these correlations make intuitive sense. Note that, in contrast to

Study 2, there was no significant relationship between personal control and external control dimensions for the "Loss of all Possessions" misfortune.

As mentioned earlier, McAulay et al. (1991) also reported a small but significant correlation of .15 between stability and external control. In the present study, only one of the obtained correlations between stability and external control reached statistical significance; $r = -.22$, $p < .01$ for "Facial Disfigurement". Note that, in contrast to the McAulay et al. (1991) datum, but consistent with Study 2, the obtained correlation between external control and stability was negative. That is, there was a slight tendency to perceive the causes of "Facial Disfigurement" to be both stable and uncontrollable by external agents/forces. As already mentioned, this relation makes intuitive sense for the facial disfigurement problem (e.g., some genetic cause).

In summary, as in Study 2, the causal dimension subscales for the new test showed good reliability and, in general, theoretically expected correlations among the causal dimensions for each of the misfortunes were found. Further, for two misfortunes on the new test, the present findings indicated good discriminant validity of the four causal dimensions it purportedly measures. However, for one of the misfortunes ("Cancer"), people's responses did not neatly match the predicted theoretical dimensions and the discriminability of all but the "External Control" dimension were low. In addition, the discriminability of the locus and personal control dimensions was low for the other half of the misfortunes on the test, which again emphasized the point that while empirical separability of causal dimensions may not always occur, that does not in itself invalidate conceptual separability of the dimensions.

Table 8

*Intercorrelations of causal dimension subscales: Study 3 (N = 200)*

| | | Cancer | | | | Divorce | | | | Bankruptcy | | | | Facial Disfigurement | | | | Friendlessness | | | | Loss of All Possessions | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | LC | PC | EC | ST | LC | PC | EC | ST | LC | PC | EC | ST | LC | PC | EC | ST | LC | PC | EC | ST | LC | PC | EC | ST |
| Cancer | LC | 100 | | | | | | | | | | | | | | | | | | | | | | | |
| | PC | 27 | 100 | | | | | | | | | | | | | | | | | | | | | | |
| | EC | -33 | 05 | 100 | | | | | | | | | | | | | | | | | | | | | |
| | ST | -02 | -56 | -10 | 100 | | | | | | | | | | | | | | | | | | | | |
| Divorce | LC | 10 | 15 | 07 | -15 | 100 | | | | | | | | | | | | | | | | | | | |
| | PC | 04 | 04 | -04 | -03 | 17 | 100 | | | | | | | | | | | | | | | | | | |
| | EC | -04 | -04 | 26 | 06 | -28 | 01 | 100 | | | | | | | | | | | | | | | | | |
| | ST | 06 | -09 | 07 | 14 | 12 | -37 | -00 | 100 | | | | | | | | | | | | | | | | |
| Bankruptcy | LC | 13 | -01 | -01 | 11 | 09 | -02 | -06 | 06 | 100 | | | | | | | | | | | | | | | |
| | PC | 02 | 05 | 05 | 09 | 18 | 00 | -15 | 01 | 66 | 100 | | | | | | | | | | | | | | |
| | EC | 04 | -05 | 09 | 00 | 05 | 00 | 12 | 02 | -48 | -28 | 100 | | | | | | | | | | | | | |
| | ST | 07 | -04 | 02 | 16 | -15 | 00 | 13 | 21 | -05 | -23 | 04 | 100 | | | | | | | | | | | | |
| Facial Disfigurement | LC | 01 | 06 | 12 | 03 | -00 | -08 | 09 | 10 | -05 | -01 | 05 | 24 | 100 | | | | | | | | | | | |
| | PC | -07 | -05 | 17 | 11 | -13 | -18 | 17 | 21 | -02 | -06 | 06 | 18 | 51 | 100 | | | | | | | | | | |
| | EC | -03 | 03 | 07 | -06 | -09 | -03 | 06 | -02 | -09 | -01 | 13 | -07 | -08 | 20 | 100 | | | | | | | | | |
| | ST | -01 | -00 | -03 | -04 | 08 | 13 | -02 | 04 | 07 | -01 | -10 | 11 | -02 | -36 | -22 | 100 | | | | | | | | |
| Friendlessness | LC | 10 | -05 | 03 | 14 | 02 | 05 | -09 | 06 | 19 | 19 | 00 | 08 | 02 | -06 | -07 | 05 | 100 | | | | | | | |
| | PC | 13 | 00 | -00 | 00 | 10 | 03 | -20 | 04 | 10 | 26 | 02 | 01 | -00 | -09 | -10 | 04 | 49 | 100 | | | | | | |
| | EC | -11 | 04 | 08 | -04 | 03 | 10 | 28 | 02 | -11 | -09 | 09 | 07 | 09 | 04 | 07 | 05 | -46 | -25 | 100 | | | | | |
| | ST | 00 | -07 | 12 | 22 | -14 | -03 | 20 | 10 | -05 | -18 | 17 | 30 | 05 | 12 | -00 | -03 | 01 | -37 | 04 | 100 | | | | |
| Loss of All Possessions | LC | -11 | -00 | 22 | -02 | -06 | -16 | 06 | 18 | 00 | -08 | -04 | 08 | 08 | 13 | 03 | 04 | -00 | -14 | 00 | 16 | 100 | | | |
| | PC | -12 | 04 | 24 | -00 | -14 | -20 | 15 | 19 | 01 | -03 | 01 | 06 | 06 | 25 | 12 | 00 | -00 | -11 | 01 | 16 | 78 | 100 | | |
| | EC | 02 | 04 | -01 | 03 | -06 | 07 | 03 | -00 | -07 | 02 | 17 | 11 | 03 | 04 | 05 | -03 | -06 | 00 | 13 | 11 | -20 | 01 | 100 | |
| | ST | 14 | 02 | -01 | -05 | 08 | 07 | 04 | 04 | 03 | 02 | -04 | 14 | 12 | -03 | -10 | 20 | -00 | -04 | 09 | 05 | -05 | -19 | -07 | 100 |

Note: Decimals omitted. Bold-face values are significant at p < .01

LC=Locus of Causality    EC=External Control
PC=Personal Control    ST=Stability

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*Relationships between AS and selected trait variables*

Another validity consideration in the present study had to do with relationships between the hypothesized AS construct and trait variables predicted to be within and outside of its nomological network. That is, did a score labelled "controllability AS for others' misfortunes" correlate (or show no relationships) as predicted with selected trait variables? To examine this question, a score labelled "controllablity AS for others' misfortunes", or CASOM, was obtained by summing the locus and personal control dimension scores for all the misfortunes. An examination of the standard deviations of the locus and personal control subscale scores on the new test, both within and across the misfortunes, revealed no differences large enough to derive a scaled combined score. Hence, a subject's "controllability AS for others' misfortune", or "CASOM", score was the sum of rating scales 1, 6, and 9 (locus items) for all the misfortunes plus the sum of items 2, 4, and 10 (personal control items) for all the misfortunes.[3] An examination of correlations in Table 9 indicated there were no significant correlations between CASOM scores and any of the selected PRF-E variables; average $r = -.06$. As shown in Table 9, all of the obtained correlations between CASOM scores and the PRF-E trait dimensions were quite low; average $r = -.01$. Thus, there was no evidence in the present data that controllability attributions about others misfortunes are related to any of several traditional trait dimensions, as measured by the PRF (Jackson, 1989).

*Situation-specificity versus generality of the new construct*

As in Study 2, the main validity consideration had to do with the situation-specificity or generality of the construct. Thus, the question was to what degree, if any, subscales would show that subjects were discriminating between the different

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types of misfortunes. Intercorrelations among all the causal dimension subscales are shown in Table 8. Again, for simplicity, I have included in a separate table (Table 10) the cross-situational consistency coefficients that are crucial to the present investigation. In Table 10, those coefficients are contained in the outlined triangles. Examination of the intercorrelations of in Table 10 indicated that 16% (5/30) of the cross-situational consistency coefficients were statistically significant, which exceeds chance. None of these significant correlations reached very high levels (e.g., the largest correlation was .25). However, as in Study 2, the pattern of significant correlations showed some organization. For example, consistent with Study 2, perceptions of the locus and personal controllability of "Bankruptcy" correlated positively with those same perceptions for "Has no Friends"; $r = .19$, $p < .01$ for locus, $r = .20$, $p < .001$ for personal control. In other words, subjects in the present study showed a slight tendency to perceive the causes of both misfortunes in the same way. An examination of the means in Table 6 indicated that subjects judged these two misfortunes to be relatively controllable by the victim.

Also consistent with Study 2 was the positive correlation between perceptions of the personal controllability of "Facial Disfigurement" and of "Loss of all Possessions" in the present study; $r = .25$, $p < .01$. That is, subjects in the present study showed a slight tendency to perceive the causes of both misfortunes in a similar way. An examination of means in Table 6 indicated that subjects judged these two misfortunes to be relatively uncontrollable by the victim. Unlike responses in Study 2, the correlation on the locus dimension for these misfortunes did not reach significance.

Table 9

*Correlations between controllability attributional style scores and PRF-E self ratings: Study 3 (N = 200)*

| | |
|---|---|
| Aggression | -.06 |
| Change | -.10 |
| Dominance | -.06 |
| Impulsivity | -.07 |
| Nurturance | -.02 |
| Abasement | .09 |
| Achievement | -.01 |
| Affiliation | -.02 |
| Autonomy | .01 |
| Cognitive Structure | .04 |
| Defendence | -.00 |
| Endurance | -.11 |
| Exhibitionism | .04 |
| Harmavoidance | .06 |
| Order | -.09 |
| Play | .03 |
| Sentience | .04 |
| Social Recognition | .10 |
| Succorance | .03 |
| Understanding | -.07 |
| Infrequency | -.05 |
| Desirability | -.09 |

Table 10

*Intercorrelations of locus and personal control causal dimension subscales: Study 3*

*(N = 200)*

| | | Locus Scales Misfortune | | | | | | Personal Control Scales Misfortune | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 1 | 2 | 3 | 4 | 5 | 6 |
| Locus Scales | 1 | 100 | | | | | | | | | | | |
| | 2 | 10 | 100 | | | | | | | | | | |
| | 3 | 13 | 09 | 100 | | | | | | | | | |
| | 4 | 01 | -00 | -05 | 100 | | | | | | | | |
| | 5 | 10 | 02 | 19 | 02 | 100 | | | | | | | |
| | 6 | -11 | -06 | 00 | 08 | 00 | 100 | | | | | | |
| Personal Control Scales | 1 | **27** | 15 | -01 | 06 | -05 | -00 | 100 | | | | | |
| | 2 | 04 | 17 | -02 | -08 | 05 | -16 | 04 | 100 | | | | |
| | 3 | 02 | **18** | **66** | -01 | 19 | -08 | 05 | 00 | 100 | | | |
| | 4 | -07 | -13 | -02 | **51** | -06 | 13 | -05 | -18 | 06 | 100 | | |
| | 5 | 13 | 10 | 10 | -00 | **49** | -14 | 00 | 03 | **26** | 09 | 100 | |
| | 6 | -12 | -14 | 01 | 06 | -00 | **78** | 04 | **-20** | -07 | **25** | -11 | 100 |

Note: Decimals omitted. Bold-face values are significant at $p < .01$

1 = Cancer; 2 = Divorce; 3 = Bankruptcy;
4 = Facial Disfigurement; 5 = Friendlessness;
6 = Loss of all possessions

However, as can be seen in Table 10, overall, the obtained correlations were quite small. The average cross-situational consistency coefficient was only .06 for locus and .09 for personal control. Thus, there was also substantial discriminativeness, or, rather, little evidence of *broad* cross-situational consistency in causal attributions about others' misfortunes. Once again, the discriminativeness indicated by the data does not mean attributions about others' misfortunes were completely random. In addition to the patterns of significant correlations outlined above, 9/15, or 60% of the locus cross-situational consistency coefficients were positive, and none of the negative coefficients for the locus dimension reached significance. Further, 6/15 (40%) of the personal control cross-situational consistency coefficients were positive.

However, both of the proportions of positive cross-situational consistency coefficients were substantially lower than corresponding proportions found in Study 2. Moreover, in contrast to Study 2, two of the significant cross-situational consistency coefficients for the personal control dimension were *negative* in the present study. For example, perceptions of the personal controllability of "Divorce" correlated negatively with perceptions of the personal controllability of "Facial Disfigurement" and "Loss of all Possessions"; $r$'s = -.18 and -.20, respectively, and $p$'s < .01. These negative correlations strongly challenge the notion of a broad cross-situational consistency in causal perceptions of others' misfortunes.

Two more detailed analyses than those reported above were used to examine the situation-specificity vs. generality of the new test. I will first report results from a principal components analysis and will then proceed to the results of confirmatory factor analyses that were conducted on the combined data set of Studies 2 and 3 ($N$ = 506).

The principal components analysis was conducted on the 24 causal dimension subscale scores whose intercorrelations were presented in Table 8, above; i.e., on the four causal dimension subscale scores (locus, personal control, external control, and stability) computed for each of the six misfortunes. Those subscale scores were factored in an overall analysis of the six-misfortune test. Initial extraction was by the principal components method, and then varimax rotation was used to achieve simple structure of the factors to be extracted. Factor loadings equal to or greater than .30 identified salient items. As in the components analyses described earlier, the number of factors was determined by a scree test (Cattell, 1966) of the eigenvalues of the unaltered correlation matrix. In the present analysis, factor cutoff was made where the incremental differences between consecutive factors became negligible (Cattell, 1966).

The scree test for factor cutoff and results of the principal components analysis of the new test are reported in Appendix H. As shown in that appendix, ten factors were extracted in the analysis. Similar to findings in Study 2, most of the factors were comprised of one set of two items. Each factor was labelled (see appendix) according to the content of the items which showed high loadings on that factor. As in Study 2, the factors extracted from people's responses to the test items were quite situationally-specific; i.e., "disasterosity" factors, that largely reflected expected within-misfortune correlations among the causal dimensions (see discusion above). Six of the ten factors extracted in the present analysis were identical to factors extracted in Study 2, and the remaining four factors showed substantial overlap with those found in Study 2. Thus, in the present study, as in Study 2, the principal components analysis of the factor structure of the new test provided no support for the notion of broad cross-situational consistency in causal

perceptions of others' misfortunes, but instead indicated there was a good deal of discriminativeness in those causal perceptions.

Confirmatory factor analysis (Joreskog & Sorbom, 1984) was used to estimate the proportion of variance in the items on the new test that could be attributed to "controllability AS for others' misfortunes". The data sets from Studies 2 and 3 were combined to provide a larger sample for the confirmatory factor analytic procedures. In the first set of analyses, correlations were computed among the 72 causal dimension items on the test and hypothesized factor models were tested against the obtained correlation matrix using the Linear Structural Relationships (LISREL) VI programme (Jöreskog & Sörbom, 1984). Using maximum likelihood estimation, the LISREL VI programme calculates the factor loadings that provide the best possible fit of the hypothesized model to the obtained data. A chi-square goodness of fit statistic, provided by the estimation procedure, compares how well the hypothesized model reproduces the observed correlation matrix. Models that produce a derived correlation matrix that differs substantially from the obtained correlation matrix are considered to be poor or inadequate models. According to Jöreskog & Sörbom (1984), large values of chi-square typically reflect an inadequate fit, and small values of chi-square typically reflect a good fit between the hypothesized model and the obtained data. Thus, rejection of a hypothesized model is usually based on statistically significant chi-square values (Jöreskog & Sörbom, 1984). However, it has been recognized that the chi-square goodness of fit statistic is affected by sample size (Jöreskog & Sörbom, 1984). That is, model estimation using large samples tends to result in significant values of chi-square. Hence, model rejection may be indicated even though the hypothesized model may fit the obtained matrix very well. For this reason, the LISREL VI programme computes a "Goodness of Fit Index", or GFI, that is "independent of

sample size" (Jöreskog & Sörbom, 1984, p. I.41). The GFI corresponds to the proportion of variance in the obtained correlation matrix accounted for by the hypothetical model, and may take a value between 0 and 1 (Jöreskog & Sörbom, 1984). It has been argued that models for which the goodness of fit index is less that .90 likely need improvement (e.g., Bentler & Bonnett, 1980). There exist several other "normed fit" indices that are relatively independent of sample size (e.g., Bentler & Bonnett, 1980; Bollen, 1989). However, in the present analyses, model adequacy was judged on the basis of values of the GFI (Jöreskog & Sörbom, 1984) that exceeded .90.

The first model that was tested hypothesized that the causal dimension items on the new test formed four factors that corresponded to the locus, personal control, external control, and stability causal dimensions. Given that there were predicted relationships between the causal dimensions (see earlier discussions), the four hypothesized factors were allowed to correlate. Thus, the hypothetical factor structure of the new test was assumed to be oblique, instead of orthogonal. This model was found to provide a very poor fit to the data, $\chi^2$ (2478) = 14548.19, $p <$ .0001; GFI=.48. The poor fit of the four-factor model was not unexpected given the findings of substantial discriminativeness in the causal perceptions outlined above (e.g., the principal components analysis). Thus, the confirmatory factor analysis procedure corroborated the findings of earlier analyses, and strongly suggested that a conceptualization of the new test as comprised of items that formed 4 causal dimension factors was not appropriate.

The second model tested against the obtained data hypothesized that both cross-situational consistency and situational specificity were responsible for responses to the new test. That is, the second model that was tested hypothesized that the causal dimension items on the new test formed four factors corresponding

to the locus, personal control, external control, and stability causal dimensions, and formed six independent factors corresponding to each of the misfortunes on the test. Again, the four causal dimension factors were allowed to correlate. This 10-factor model was an improvement over the first model, but was also found to provide a very poor fit to the data, $\chi^2$ (2406) = 7042.85, $p < .0001$; GFI=.691.

One possible explanation for the poor fit of the 10-factor model was that there was no cross-situational consistency in the data and causal perceptions were completely situation-specific. This idea suggested a 24-factor model in which the new test was conceptualized as comprised of items that formed four causal dimension factors for each misfortune/item, for a total of 24 factors (i.e., 4 separate causal dimensions that were completely misfortune-specific). Again, given predicted correlations among the causal dimensions, the four factors within a misfortune were allowed to correlate. This model was an improvement over the two previous models, but still provided a poor fit to the data, $\chi^2$ (2208) = 3804.85, $p < .0001$; GFI=.833.

The poor fit of the 24-factor and 10-factor models suggested an examination of the validity of a 4-factor solution for each misfortune. That is, the model that was tested in a separate analysis for each misfortune hypothesized that the causal dimension items formed four factors that corresponded to the locus, personal control, external control, and stability causal dimensions. For each analysis, the four hypothesized factors were allowed to correlate. The hypothesized four-factor structure for each misfortune on the test was found to provide an excellent fit to the data in every case. The average $\chi^2$ (48) = 169.30, for the six separate analyses; average GFI = .95. Thus, using the combined data set, confirmatory factor analysis indicated that the discriminability of the four causal dimensions on the new test

was good. These results were consistent with findings of McAulay et al. (1991) in their confirmatory analyses of the CDSII factor structure.

Taken together, the poor fit of the 24-factor model above, and the finding that a four-factor solution provided an excellent fit to the obtained correlations for each of the misfortunes analyzed separately, pointed to the substantial complexity added by the between-misfortunes correlations. Therefore, to simplify, the next set of models was tested against obtained correlations between the 24 causal dimension subscales (Table 11) for the combined data set.

The first model tested against the reduced data matrix hypothesized that the causal dimension subscale items formed four factors that corresponded to the locus, personal control, external control, and stability causal dimensions. Again, the four hypothesized factors were allowed to correlate. However, serious problems were encountered with this model. The LISREL VI programme was unable to converge on a solution. The inability to converge suggested a fundamental misspecification in the model being tested. However, in such cases it is virtually impossible to know where the specification problem(s) lies. One possibility that may have been creating difficulty for the procedure in the present analysis was the strong correlations between the locus and personal control subscales, two of which were as high as .72 and .67. To examine this possibility, a composite score was computed by summing the locus and personal control subscales, and a three-factor model was tested against the new 18 variable correlation matrix (Table 12). Although the chi-square statistic was highly significant, this model was found to provide quite a good fit to the data, $\chi^2$ (132) = 521.78, $p$ < .0001; GFI = .906. The maximum likelihood estimates (factor loadings) are presented in Table 13.

Table 11

*Intercorrelations of causal dimension subscales: Combined data set (N = 506)*

| | Cancer | | | | Divorce | | | | Bankruptcy | | | | Facial Disfigurement | | | | Friendlessness | | | | Loss of All Possessions | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LC | PC | EC | ST | LC | PC | EC | ST | LC | PC | EC | ST | LC | PC | EC | ST | LC | PC | EC | ST | LC | PC | EC | ST |
| **Cancer** LC | 100 | | | | | | | | | | | | | | | | | | | | | | | |
| PC | **29** | 100 | | | | | | | | | | | | | | | | | | | | | | |
| EC | **-32** | -02 | 100 | | | | | | | | | | | | | | | | | | | | | |
| ST | -04 | **-48** | -02 | 100 | | | | | | | | | | | | | | | | | | | | |
| **Divorce** LC | 06 | 07 | 02 | -00 | 100 | | | | | | | | | | | | | | | | | | | |
| PC | 01 | 03 | -02 | 03 | **24** | 100 | | | | | | | | | | | | | | | | | | |
| EC | -07 | -10 | **23** | 10 | **-25** | 01 | 100 | | | | | | | | | | | | | | | | | |
| ST | 03 | -03 | 06 | **12** | 08 | **-31** | -08 | 100 | | | | | | | | | | | | | | | | |
| **Bankruptcy** LC | 11 | 02 | -00 | 04 | **14** | 08 | -01 | -00 | 100 | | | | | | | | | | | | | | | |
| PC | 04 | 07 | 01 | 00 | **12** | 08 | -04 | -06 | **67** | 100 | | | | | | | | | | | | | | |
| EC | -00 | -03 | **13** | 02 | 04 | 00 | **18** | 03 | **-41** | **-26** | 100 | | | | | | | | | | | | | |
| ST | 05 | -05 | 07 | **20** | -05 | 00 | 11 | **23** | 03 | **-15** | 05 | 100 | | | | | | | | | | | | |
| **Facial Disfigurement** LC | 04 | -01 | 05 | 04 | -01 | -09 | 08 | 07 | 04 | 00 | 01 | **20** | 100 | | | | | | | | | | | |
| PC | 03 | 00 | 11 | 04 | -06 | -05 | 09 | 06 | -01 | -00 | 01 | 11 | **42** | 100 | | | | | | | | | | |
| EC | 01 | -03 | 08 | 00 | -03 | 04 | 10 | -01 | -08 | -02 | **14** | -02 | **-13** | **21** | 100 | | | | | | | | | |
| ST | -00 | -00 | -07 | 02 | 07 | 00 | -03 | 05 | 03 | -00 | -00 | 06 | 04 | **-31** | **-22** | 100 | | | | | | | | |
| **Friendlessness** LC | **18** | 03 | -07 | -00 | 07 | 07 | -05 | -05 | **18** | **17** | 01 | -03 | 00 | 00 | -04 | 02 | 100 | | | | | | | |
| PC | 08 | 04 | -06 | -03 | 01 | 09 | -03 | -08 | 03 | **22** | 04 | -11 | -04 | -02 | -02 | 01 | **55** | 100 | | | | | | |
| EC | -07 | -05 | **17** | 04 | -00 | 03 | **23** | 06 | -01 | -00 | 10 | 05 | 07 | 03 | 07 | 01 | **-43** | **-24** | 100 | | | | | |
| ST | -02 | -08 | **12** | **18** | -03 | -07 | 08 | **23** | 00 | **-14** | **12** | **33** | **13** | **13** | 00 | -01 | 02 | **-29** | 02 | 100 | | | | |
| **Loss of All Possessions** LC | -00 | -01 | **16** | 03 | 00 | -09 | 09 | 07 | 00 | -07 | 00 | **12** | **16** | **17** | 02 | -01 | 00 | -07 | 00 | **15** | 100 | | | |
| PC | -03 | -00 | **15** | 06 | -01 | -04 | **13** | 05 | 01 | -01 | 04 | 09 | 07 | **28** | **12** | -03 | 01 | -00 | -01 | **15** | **72** | 100 | | |
| EC | 01 | -03 | 05 | 05 | -01 | 06 | **13** | 02 | -02 | 01 | **18** | 08 | 02 | **13** | **24** | -07 | -05 | -00 | **13** | 08 | -10 | **15** | 100 | |
| ST | 09 | 02 | -04 | 00 | 03 | -00 | -00 | 07 | -04 | -00 | 02 | **15** | 08 | -00 | 04 | **19** | 00 | -03 | 03 | 07 | 00 | **-12** | -00 | 100 |

Note: Decimals omitted. Bold-face values are significant at p < .01

LC=Locus of Causality     EC=External Control
PC=Personal Control     ST=Stability

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Table 12

Intercorrelations of causal dimension subscales (composite Locus and Personal Control subscale): Combined data set (N = 506)

| | | Cancer | | | Divorce | | | Bankruptcy | | | Facial Disfigurement | | | Friendlessness | | | Loss of All Possessions | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | L+P | EC | ST | L+P | EC | ST | L+P | EC | ST | L+P | EC | ST | L+P | EC | ST | L+P | EC | ST |
| Cancer | L+P | 100 | | | | | | | | | | | | | | | | | |
| | EC | -18 | 100 | | | | | | | | | | | | | | | | |
| | ST | -37 | -02 | 100 | | | | | | | | | | | | | | | |
| Divorce | L+P | 06 | 00 | 02 | 100 | | | | | | | | | | | | | | |
| | EC | -11 | 24 | 10 | -14 | 100 | | | | | | | | | | | | | |
| | ST | -00 | 06 | 12 | -16 | -08 | 100 | | | | | | | | | | | | |
| Bankruptcy | L+P | 08 | 00 | 02 | 14 | -02 | -04 | 100 | | | | | | | | | | | |
| | EC | -03 | 13 | 02 | 02 | 18 | 03 | -37 | 100 | | | | | | | | | | |
| | ST | -01 | 07 | 21 | -02 | 10 | 23 | -06 | 05 | 100 | | | | | | | | | |
| Facial Disfigurement | L+P | 01 | 10 | 05 | -09 | 10 | 08 | 01 | 01 | 18 | 100 | | | | | | | | |
| | EC | -02 | 09 | 00 | 01 | 10 | -01 | -05 | 14 | -02 | 04 | 100 | | | | | | | |
| | ST | -00 | -08 | 01 | 05 | -02 | 05 | 01 | -00 | 06 | -15 | -21 | 100 | | | | | | |
| Friendlessness | L+P | 10 | -07 | -02 | 08 | -05 | -07 | 19 | 03 | -09 | -00 | -04 | 03 | 100 | | | | | |
| | EC | -08 | 18 | 04 | 01 | 23 | 06 | -00 | 10 | 05 | 05 | 06 | 02 | -38 | 100 | | | | |
| | ST | -07 | 11 | 18 | -06 | 08 | 23 | -08 | 12 | 34 | 16 | 01 | -01 | -15 | 03 | 100 | | | |
| Loss of All Possessions | L+P | -01 | 17 | 05 | -05 | 11 | 07 | -01 | 02 | 11 | 22 | 08 | -02 | -02 | -00 | 17 | 100 | | |
| | EC | -02 | 05 | 05 | 03 | 13 | 02 | -00 | 18 | 08 | 08 | 24 | -06 | -04 | 13 | 09 | 02 | 100 | |
| | ST | 06 | -04 | 00 | 01 | -00 | 07 | -02 | 02 | 14 | 04 | 04 | 19 | -01 | 03 | 08 | -07 | -00 | 100 |

Note: Decimals omitted. Bold-face values are significant at p < .01

L+P=Locus+Personal Control    EC=External Control
ST=Stability

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Table 13

*Maximum likelihood estimates (factor loadings): Three factor model*

| SCALE | FACTOR 1 CASOM | FACTOR 2 EC-AS | FACTOR 3 ST-AS |
|---|---|---|---|
| CAN/LC+PC | **0.235** | 0.000 | 0.000 |
| DIV/LC+PC | **0.188** | 0.000 | 0.000 |
| BNK/LC+PC | **0.227** | 0.000 | 0.000 |
| FAC/LC+PC | **-0.303** | 0.000 | 0.000 |
| FRD/LC+PC | **0.314** | 0.000 | 0.000 |
| LOS/LC+PC | **-0.293** | 0.000 | 0.000 |
| CAN/EC | 0.000 | **0.417** | 0.000 |
| DIV/EC | 0.000 | **0.509** | 0.000 |
| BNK/EC | 0.000 | **0.364** | 0.000 |
| FAC/EC | 0.000 | **0.273** | 0.000 |
| FRD/EC | 0.000 | **0.421** | 0.000 |
| LOS/EC | 0.000 | **0.316** | 0.000 |
| CAN/ST | 0.000 | 0.000 | **0.337** |
| DIV/ST | 0.000 | 0.000 | **0.393** |
| BNK/ST | 0.000 | 0.000 | **0.583** |
| FAC/ST | 0.000 | 0.000 | **0.034** |
| FRD/ST | 0.000 | 0.000 | **0.599** |
| LOS/ST | 0.000 | 0.000 | **0.156** |

Note:  CAN = CANCER; DIV = DIVORCE; BNK = BANKRUPTCY
FAC = FACIAL DISFIGUREMENT; FRD = FRIENDLESSNESS
LOS = LOSS OF ALL POSSESSIONS

LC = LOCUS; PC = PERSONAL CONTROL
EC = EXTERNAL CONTROL; ST = STABILITY

Estimates of the variance in each causal subscale item explained by the hypothesized attributional style dimension may be obtained by squaring the factor loadings in Table 13. Thus, from these loadings it was found that between 1% and 36% of the variance in the subscale items on the new test could be explained by the three attributional style dimensions. An average of only 6.9% of the variance in the causal subscale items appeared to be due to a controllability attributional style. Somewhat higher, but still modest averages of 15% and 16% appeared due to external control and stability attributional styles, respectively. However, as shown in Table 13, two of the factor loadings for controllability AS were *negative*, which indicated that this 3-factor model was also fundamentally wrong. That is, the hypothesized 3-factor attributional style model was reasonable in form compared to the 4-factor model hypothesized above, in that the programme was able to converge on a solution without problem. But, the negative maximum likelihood estimates indicated that the values predicted by the model were quite different from obtained values.

In summary, there were some weak indications in Study 3 that causal perceptions were not completely random. However, the sketchy picture of a "positive trend" to make similar causal judgements about others' bad outcomes was not as clear in the present study as in Study 2. When the data sets from the two studies were combined, confirmatory factor analysis provided very little evidence of an organization in people's causal perceptions consistent with the notion of an attributional style. Only 6.9% of the variance in the new test subscales could be attributed to a controllability AS. Further, a serious problem was encountered in modeling the data; that is, the predicted values of the hypothetical attributional style model were found to be fundamentally inappropriate to the obtained correlations. In contrast, both in Study 2 and Study 3, there was evidence of

substantial discriminativeness in causal perceptions of others' misfortunes, which strongly challenged the notion of a cognitive "style".

# CHAPTER IV

## GENERAL DISCUSSION

At the outset of this thesis, the reader was informed of a relatively new individual difference concept, "attributional style", which has been the focus of a number of recent investigations in psychology. It was explained that the "cognitive trait" concept known as "attributional style" refers to cross-situational consistency in causal attributions about some specific class of situations, or, more simply, to a personal bias to explain certain events/outcomes in a systematic way. It was the intent of the present thesis to test the validity of the "attributional style" construct as defined in one area of person perception; specifically, perceptions of the causal controllability of others' misfortunes.

The results of the present studies raise serious questions about the existence of such a "controllability attributional style for others' misfortunes". In Studies 1 and 2, there was some evidence of cross-situational consistency in causal perceptions. That is, in both studies, the number of statistically significant cross-situational consistency coefficients was low but above chance, and the pattern of significant correlations reflected some organization. However, in both studies, the average cross-situational consistency coefficients were very low and non-significant, and the principal components analyses revealed "misfortune factors". Further, the confirmatory factor analysis on the combined data set provided only slight evidence of a controllability attributional style. In other words, causal perceptions of others' misfortunes were not completely random, but there was strong evidence of discriminativeness in people's attributions on the new test.

The weak evidence for an attributional style in the present studies is consistent with results reported in several other evaluations of the attributional style concept (e.g, Arntz et al., 1985; Cutrona et al., 1985; Miller et al., 1982). In

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particular, the present results are quite similar to findings reported by Cutrona et al. (1985). As mentioned earlier, in their examination of the construct validity of attributional style (as measured by the ASQ), Cutrona et al. (1985) reported that attributional styles explained, on average, between 3.8% and 33.9% of the variance in ASQ items. In the present studies, attributional styles explained, on average, between 6.9% and 16% of the variance in the causal subscale items on the new test.

The weak evidence of cross-situational consistency in the present studies is strikingly similar to findings from Mischel and Peake's (1982) Carleton Behavior Study. As mentioned earlier, in their study of "conscientiousness", Mischel and Peake (1982) found that 20% of the cross-situational consistency coefficients reached statistical significance, and there were some "coherences" in the pattern of significant correlations. In the present work, 20% and 16% of the cross-situational consistency coefficients reached significance in Study 1 and Study 2, respectively, and there was evidence of some organization in the significant correlations. However, Mischel and Peake (1982) found that the average cross-situational consistency coefficient was quite low (.13) and overall, the pattern of correlations was "erratic", which indicated that there was a good deal of discriminativeness in people's "conscientious" behaviour. In the present studies, the average cross-situational consistency coefficients were also quite low (e.g., .07), and the factor analyses indicated that there was substantial discriminativeness in people's causal perceptions of others' misfortunes.

The weak evidence of cross-situational consistency in controllability attributions in the present work is noteworthy in light of the argument that the generality of AS should be more pronounced for hypothetical events than for actual events, as the former activate more cognitively simple structures (e.g., stereotypes) than do actual events (Anderson et al., 1988). It would be difficult to find weaker

evidence of cross-situational consistency than was found in the present studies. However, as mentioned earlier, in a number of examinations of AS (as measured by the ASQ, ASAT, or alternative measures), researchers reported there was only modest evidence of an AS either for hypothetical (e.g., Anderson et al., 1988; Arntz et al., 1985; Cutrona et al., 1985; Peterson et al., 1982; Peterson & Seligman, 1984) or for actual negative events (e.g., Cutrona et al., 1985; Miller et al., 1982). Thus, given the present findings, the individual attribution researcher must decide whether it would be useful to undertake a search for cross-situational consistency in causal perceptions about actual outcomes of others.

The weak cross-situational consistency in causal attributions in the present studies is noteworthy for another reason. The referents for the trait were those that were perceived to be referents by the subjects themselves, and were not chosen by the researcher. Bem and Allen (1974) have argued that people will be "inconsistent to the degree that their behaviors do not sort into the equivalence class which the investigator imposes by his choice of behaviors and situations to sample" (p. 509). However, the present findings suggest that even empirically determining the equivalence class (i.e., organizing situation-types by finding out what situations are relevant or generally available to people) did not provide an organization that captured important AS differences.

Although the appropriate level of situational-specificity (if any exists) for assessing important AS differences for the fates of others is yet to be determined, the present findings suggested some possibilities. For instance, the present studies assessed causal perceptions of six misfortunes, and the causes of two ("Bankruptcy" and "Friendlessness") of those six misfortunes were perceived to be relatively controllable, while the causes of two other misfortunes ("Facial Disfigurement" and "Loss of all Possessions") were perceived to be relatively uncontrollable. These

findings suggest that the first two misfortunes represent one equivalence class and that the second two represent another equivalence class. This possibility of different equivalence classes among the misfortunes on the new AS test raises several procedural limitations of the present studies that bear on the weak evidence of attributional style. For example, the small number (six) of misfortunes over which causal perceptions were assessed may have been a limiting factor in uncovering evidence of attributional style. That is, it is possible that attributional style differences could be captured by assessing causal perceptions of a larger number of misfortunes (e.g., the original 20-misfortune version of the new AS test). In addition, the particular misfortunes chosen for the present investigation may have been a limiting factor in finding evidence of attributional style. That is, the empirical question remains of whether there exists enough cross-situational consistency in causal perceptions about a different set of six (or more) misfortunes-- than were used in the present studies--to warrant the name "attributional style".

The present analysis indicated that people were quite inconsistent in their attributions for the broad category "others' misfortunes". But it is possible that AS's for others' fates may be more specific, e.g., AS for others' illnesses, AS for others' interpersonal problems, AS for others' financial problems, and so forth. Similarly, in their investigation of the ASQ, Cutrona et al. (1985) noted that "people's implicit equivalence classes are much more narrowly conceived" (p. 1055) than those the ASQ samples from, and that, if "attributional equivalence classes" (p. 1055) exist, they "appear to be very narrowly defined" (p. 1055). However, it has been argued that increasing the situational specificity of a trait diminishes its "traitness". As mentioned earlier, Mischel (1974) argued that the more situationally-specific a trait, the less it fits the "trait" conception and the more it resembles a "relatively specific description of a behavior-situation unit" (p. 257). Thus, attributional styles

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as specific to situations as "other's illnesses", "others' financial problems", and so forth, preclude the notion of a cognitive "style" (which implies a broader cross-situational consistency).

The weak evidence of an "attributional style" in the present investigation raised the possibility of a procedural limitation in the examination of "attributional style" in general. For example, in the present studies, subjects were asked to ascribe one likely cause for each of the misfortunes on the new AS test, and to then rate each cause on a number of semantic differential scales. "Controllability attributional style" was defined in the present context as the tendency to make internal, controllable inferences about the causes of others' misfortunes. However, it is possible that the process of thinking about only one cause--presumably the most salient or available cause for that individual--is a limiting one, in the sense that once a cause has been chosen, there are only a few "degrees of freedom" with respect to the cause's locus, controllability, and stability. Assuming "attributional style" exists, then, this possibility raises the question of where the personal bias--"attributional style"--comes into play cognitively? Does "attributional style" refer to inferences *about* the cause of a misfortune? Or does "attributional style" play a role in determining the *choice* of a cause, for which the dimensional inferences then follow naturally and rather independently of the personal bias? These important questions should be disentangled in future studies. For instance, in assessing "attributional style", it might be useful to ask people to think of *all possible* reasons for a misfortune and then to rate that set of reasons--a sort of "cognitive average" of causes for some misfortune--on relevant causal dimensions.

The weak evidence of an "attributional style" in the present studies should be interpreted cautiously for several reasons. First, the slight "positive trend" to make similar causal judgements about others' misfortunes was not as clear in

Study 3 as in Study 2. Further, in Study 3, two of the personal control, cross-situational consistency coefficients that reached statistical significance were *negative*. Finally, a serious problem encountered in modeling the data was that the predicted values of the hypothetical attributional style model were found to be fundamentally inappropriate to the obtained correlations. Bearing in mind the procedural limitations outlined above, these findings pose strong challenges to the notion of a "controllability attributional style for others' misfortunes", as assessed by the new test.

Thus, the trait conception of attributional style (cross-situational consistency in attributions) in the domain of person perception was not empirically supported in the present studies. Further, potential trait correlates of the hypothesized AS construct showed no correspondence to a score representing controllability attributional style. The low correlations between controllability AS and trait dimensions are consistent with reported correlations in several studies that examined personality correlates of attributional style (Martin & Clark, 1985; Mitchell, 1989).

In contrast to the weak evidence of a trait-like tendency to attribute the causes of others' misfortunes in similar ways, the present studies demonstrated that responses to the test items were quite situation-specific. The factor structure of the new test reflected "misfortunes" rather than "attributional styles". In addition, although people's responses to the individual misfortunes did not always neatly match the predicted theoretical dimensions, the confirmatory factor analysis on the combined data set indicated that the discriminability of the four causal dimensions was good for each of the misfortunes on the new test. This finding is consistent with the results of McAulay et al. (1991) in their analysis of the CDSII factor structure. In combination with the evidence that, in general, theoretically expected

correlations among the causal dimensions were found for each of the misfortunes, the present work suggests that the CDSII (McAulay et al., 1991) will prove useful in assessing causal attributions about others' outcomes.

The strong evidence of discriminativeness in causal perceptions in the present studies also suggests that a good deal of information is lost when causal perception scores are summed over many outcomes. This suggestion concurs with similar recommendations made by Cutrona et al. (1985) and Mischel and Peake (1982). Cutrona et al. (1985) pointed to findings from a number of studies (including their own) that attributions tend to be quite situation-specific. Hence, they reasoned that merging the attributional information from many situations will likely obscure crucial relationships between specific attributions and health.

Similarly, Mischel and Peake (1982) argued that "cross-situational aggregation ...often has the undesirable effect of canceling out some of the most valuable data about a person" (p. 738). The authors strongly suggested that discriminativeness in behaviour should be treated as "a valid phenomenon rather than a reflection of poor methodology" (Mischel & Peake, 1982, p. 748). In keeping with these suggestions, the fact that there was little evidence in the present investigation of any broad cross-situational consistency in causal perceptions of others' misfortunes does not preclude an attributional analysis of the observed discriminativeness. As mentioned earlier, there are many factors other than personal bias that may influence causal attributions (e.g., Taylor & Fiske, 1978). In particular, situations differ widely in the behavioural constraints they impose; many seemingly trivial situational changes have been shown to have a strong impact on causal perceptions (e.g., Anderson, 1983a; Feather & Simon, 1971; Frieze & Weiner, 1971). The present findings suggest that even minimal causal structure

information (i.e., outcome labels) may have large effects upon the causal attributions people make about the fates of others.

In conclusion, although the present data showed some organization (a positive tendency) that suggested the weak presence of an attributional "style", there was also strong evidence of discriminativeness in causal perceptions about others' misfortunes, which precludes the notion of a cognitive "style". Despite the present findings, I still tend to agree with the argument of Anderson et al. (1988) that neither an overly optimistic view nor an overly pessimistic view should be taken on the validity of the AS construct at this point. The appropriate level of situation-specificity (if any exists) for assessing important AS differences regarding the fates of others will have to be determined in future studies. For example, that the "Bankruptcy" and "Friendlessness" misfortunes were perceived similarly, and that the "Facial Disfigurement" and "Loss of all Possessions" misfortunes were perceived similarly in the present studies, suggests different equivalence classes for the two set of misfortunes. Thus, attributional styles might be assessed better (a) across situations that do not differ substantially in perceived causal controllability, as did those used in the present research, and/or (b) across many more misfortunes than the six used in the present studies.

# APPENDIX A

# CATEGORIES OF SEVERE NEGATIVE EVENTS AND EXEMPLARS OF

# THE CATEGORIES: STUDY 1

## 1. BECOMING MILDLY ILL
loss of one's health
sexual dysfunction
any sexual disease

## 2. BECOMING SERIOUSLY ILL
cancer or life-threatening disease
heart attack
stroke
get a debilitating disease
serious illness
cancer of breast (& removal)
sickness affecting one's future
brain tumor
life-threatening disease
severe illness due to disease
poor health requiring one to live in a
     clinic
catastrophic illness
severe illness
contracting a life-threatening disease

## 3. BECOMING TERMINALLY ILL
AIDS or other serious illness
get deadly disease
oneself or one's partner getting AIDS
a fatal disease
oneself/loved one die of cancer
slow painful death caused by cancer

## 4. BEING ABANDONED BY A LOVED ONE
being abandoned by a loved one
abandoned with child(ren) by a thieving
     spouse

## 5. BEING ABUSED SEXUALLY OR PHYSICALLY
sexual or physical abuse
be in an abusive relationship
abused in some way by parent or
     spouse
mental abuse

## 6. BEING ADDICTED OR DEPENDENT ON DRUGS/ALCOHOL
problems with drugs
problems with alcohol
drug or alcohol dependency
addicted to something
involvement with drugs

## 7. BEING BETRAYED BY A LOVED ONE
betrayal by closest friend
best friends say something bad about
     you
betrayed by friends
betrayal by a loved one

## 8. BEING COMPLETELY ALONE (NO ONE TO CARE ABOUT)
no one to care about in one's senior
     years
being completely alone

## 9. BEING DIVORCED OR SEPARATING FROM ONE'S SPOUSE (POSSIBLY INVOLVING CHILDREN)
divorce
breakup of relationship/marriage
divorce/separation
failed marriage
divorce after having children
divorce (own or parents')

## 10. BEING IN A BAD MARRIAGE
disastrous relationship
being married to someone one hates
unhappy marriage
marriage to a bad partner
spouse doesn't understand one's
     thoughts
disappointing relationship

## 11. BEING IN A CAR ACCIDENT
car accident
major car accident

hit by a car
smash up one's car

## 12. BEING IN A FATAL ACCIDENT
accident causing death or injury
car accident causing one's death
killed in a drunk driving accident

## 13. BEING IN A NATIONAL POLITICAL CRISIS
American economic invasion
being in a world of totally selfish people
being taken over by a Communist
    dictatorship
home country purged by Communists
no democracy in China
acceptance of the Meech Lake Accord
Hong Kong ruled by China in 1997
separation (breakup) of Canada
rise of Fascism

## 14. BEING IN AN AIRPLANE CRASH
airplane crash

## 15. BEING INVOLVED IN A NATURAL DISASTER
tree falls on house
severe earthquake
struck by lightning
natural disaster (fire, flood)
struck by lightning

## 16. BEING INVOLVED WITH DRUGS/DRUG DEALING
be involved with drugs/drug dealers
wanted by drug dealers

## 17. BEING KICKED OUT OF HOME (HAVING ONE'S FAMILY SEVER TIES)
kicked out of the house
kicked out of home by one's parents
family severs ties with one

## 18. BEING KICKED OUT OF UNIVERSITY
fail courses/drop out (Univ)
kicked out of school
expelled from Univ
fail all courses/kicked out of Univ
fail out of school
kicked out of one's faculty

## 19. BEING KIDNAPPED
be kidnapped
hijacking
kidnapped by a deranged person

## 20. BEING PERSECUTED BECAUSE OF ONE'S RACE OR RELIGIOUS BELIEFS
not promoted due to racial
    discrimination
persecuted for one's faith
racism

## 21. BEING PHYSICALLY ASSAULTED
assaulted
assaulted by criminals
physical assault
assaulted and robbed
physical abuse

## 22. BEING POOR, HOMELESS, REDUCED TO BEGGING
poverty
ending up on the street, broke, lonely
    and sick
personal poverty
becoming poor
homeless
foodless (going hungry)
not enough money to survive or to have
    a decent life
nowhere to live
being penniless
poor and reduced to begging in the
    street

become a bum
living on Skid Row
need the foodbank & they have no food

## 23. BEING PUBLICALLY HUMILIATED
name/reputation tarnished
fall down in public eye
lose the respect of one's family and
    friends
ridiculed
humiliation among one's friends
loss of trust, honour, dignity

## 24. BEING ROBBED
car stolen and no insurance
mugged
theft of one's possessions
apartment gets broken into

## 25. BEING SENT TO PRISON
go to prison
sent to prison
incarceration
convicted of a crime/imprisoned
sentenced to jail

## 26. BEING SEPARATED FROM LOVED ONES
family break-up
separated from all one's friends
departure of a loved one
loss of someone loved to an unworthy
    person
family moves away
friends move away
must move away from family and/or
    friends
fight with a friend resulting in loss
lose friends/become lonely

## 27. BEING SEXUALLY ASSAULTED (RAPED)
rape
sexual assault (rape)
raped and beaten

rape/severe beating*
raped or witnessing a rape

## 28. BEING SEXUALLY HARASSED
sexual harassment
sexual harassment by
professor/supervisor

## 29. BEING UNABLE TO FIND WORK
unable to find a job
long-term unemployment (welfare)
unable to get a steady job
unemployment (loss of job, career)

## 30. BEING UNABLE TO FULFILL ONE OR MORE LIFE GOAL(S)
fail to achieve goals
non-fulfillment of life goals
be average throughout life
unable to achieve life goal
lose a goal in life
unable to live how one wants
being an underachiever
deprived of choices
extreme personal failure
not able to succeed
unable to get desired immigration
    status
dependence on one's parents for
    financial support for life
unable to live how one wants
unable to do a favourite activity ever
    again
unable to survive independently

## 31. BEING UNABLE TO GET A JOB IN ONE'S CHOSEN CAREER
unsuccessful in one's career
lousy-paying job
unable to obtain a well-paying job
forced to work at 7-eleven
unable to find a job after school
unable to get a good job
unable to perform in one's career
unable to get job one wants

never considered for a good job
unable to find a satisfying job
low rate of pay at work
unable to find right job
unable to get dream job (post-grad)
doing something one doesn't enjoy
loss of a career

## 32. BEING UNABLE TO GRADUATE
not graduating
don't graduate from University
to not get one's degree
not able to graduate

## 33. BEING UNABLE TO HAVE CHILDREN
infertility
unable to have children

## 34. BEING UNABLE TO REACH ACADEMIC GOALS
academic failure
not admitted to wanted academic
   program
unable to achieve at school
unable to obtain a degree
forced to quit school
rejected from graduate school
unable to continue University
   education
drop out of University
unable to reach academic goals
loss of parental support for one's
   education
unable to finish University after years
   of effort
no money to continue one's education

## 35. BEING UNABLE TO SUPPORT ONE'S FAMILY
have no money to raise family
loss of family income
dependent, aged parent
not able to support parents

not being able to provide for one's
   family

## 36. CAUSING SERIOUS HARM TO ANOTHER PERSON
causing irreparable harm to another
   unintentionally
involuntarily causing injury to another
   person
hitting someone with one's car
giving in to temptation which hurts
   another

## 37. CAUSING SOMEONE'S DEATH
accidentally kill a pedestrian
cause someone's death while driving
cause harm/death to another person
badly injure/kill someone

## 38. CRASHING ONE'S MOTORBIKE
crash one's motorbike
crash one's motorbike (with passenger
   on board)

## 39. DISCOVERING THAT ONE'S SPOUSE IS HAVING AN AFFAIR
spouse has affair with someone
discovery of spouse's infidelity
spouse leaves you for another person
spouse has a second affair

## 40. DYING
death
death through careless activities

## 41. DYING PREMATURELY (DYING SUDDENLY OR VIOLENTLY, AND POSSIBLY BY SUICIDE))
be murdered
be killed
death caused by earthquake
premature death
killed by a stray bullet
murdered
suicide

sudden death
murdered by gang members
death by fire or drowning
stabbed to death
die before living a full life
eaten by a shark

## 42. EXPERIENCING A MILD FINANCIAL LOSS

the General Sales Tax (G.S.T.)
inflation

## 43. EXPERIENCING A SERIOUS FINANCIAL LOSS

financial problems
losing a lot of money on bad
investments
bankruptcy
complete financial loss
loss of all stock market shares
audited by Revenue Canada
being heavily in debt
loss of large amount of money one one's
    investments
business goes bankrupt
sudden financial instability
loss of financial support
sued by someone
parent dies, leaves money to charity
stocks go down to 0.01 from 10.00
sudden loss of one's parents' support

## 44. EXPERIENCING AN ENVIRONMENTAL DISASTER THAT HAS CAUSED IRREVERSIBLE DESTRUCTION

loss of the environment
pollution
pollution (irreversible destruction)
no more forests
global warming
water contamination and shortage(s)

## 45. EXPERIENCING AN EXTREME PHYSICAL ASSAULT (POSSIBLY INCLUDING DEADLY WEAPON)

victim of a major crime
chased by an axe murderer
shot in a drive-by shooting
beaten senseless by muggers
mass murder attempt
be tortured
attempt on one's life
being shot

## 46. EXPERIENCING MILD MENTAL ILLNESS/PROBLEMS

loss of memory
amnesia
recurring memories of childhood sexual
    abuse
losing one's humour
depression
anxiety disorder
psychological problems
stressed out
depression due to disapproval of
    strangers/friends

## 47. EXPERIENCING SERIOUS MENTAL ILLNESS (LOSS OF MENTAL FACULTIES)

turning psycho
severe mental illness/nervous
breakdown
become mentally handicapped
major depression or other affective
    disorder
loss of sanity
loss of mental faculties (car accident)
mental breakdown and
    institutionalization
loss or serious impairment of
    mind/brain
deterioration of intelligence (disease)
trauma from wars

**48. FAILING A NUMBER AND POSSIBLY ALL UNIVERSITY COURSES**
fail University courses
fail miserably in school
failing all one's courses
failing a major career-deciding exam

**49. FAILING A UNIVERSITY COURSE**
failing a course

**50. FINDING YOURSELF IN A DANGEROUS SITUATION (A SITUATION WHERE THERE IS A HIGH RISK OF PERSONAL INJURY)**
car stall on highway or some desolate place
getting lost
gang warfare in home city (a lot of it)

**51. GETTING CAUGHT CHEATING ON AN EXAM IN UNIVERSITY**
caught cheating on an exam

**52. GETTING INTO TROUBLE WITH THE LAW**
arrested for breaking law
accused of a crime one didn't commit
commit crimes
be a wife-beater
get into trouble with the law
charged/convicted on a drug offense
criminal record
criminal record
prevented by authorities from leaving one's country

**53. GETTING OLD**
becoming old
not having fun when older
suffering pain in old age

**54. GETTING ONE OR MORE POOR GRADE(S)**
do badly in exams
poor grade
problems in school work
low GPA
fail an exam
sick during exam period

**55. HAVING A BAD ACCIDENT**
fall down stairs
serious accident

**56. HAVING A CHILD WITH A MEDICAL DISORDER**
child with medical disorder
abnormal child

**57. HAVING A LOVED ONE DEVELOP A TERMINAL ILLNESS**
loved one develops terminal illness
terminal illness in someone close
best friend getting AIDS

**58. HAVING A LOVED ONE DIE**
death of loved one
death of child
death of spouse
death of close family member
death of family member/friend
death of child(ren)
death of sibling
death of one's child before one's own death
death of mother
death of father
loss of best friend
loss of one's boyfriend
friend committing suicide
spouse dies first

**59. HAVING A LOVED ONE WITH MAJOR PERMANENT PHYSICAL INJURY**
disabling accident happens to spouse

**60. HAVING A LOVED ONE WITH MILD MENTAL ILLNESS/PROBLEMS**
family member with mental illness

**61. HAVING A LOVED ONE WITH NON-PERMANENT PHYSICAL INJURY**
injury of one's spouse
injury of one's sibling

**62. HAVING A MAJOR PERMANENT PHYSICAL INJURY**
car accident with personal injury
lose control of body (disease or accident)
lose sight
lose hearing
paralysis
permanent physical disability
irreversible illness caused by pollution
be put in a wheelchair
brain damage
loss of body part (arms, legs)
brain or spinal cord damage (disease)
becoming severely handicapped
accident causing loss of any senses
losing ability to speak or walk
severe disability like quadriplegia
serious accident (impairing body
    functions)
a disfiguring trauma
loss of an eye
accident causing disfigurement of one's
    face or body
accident or disease causing one to
    become a "vegetable"
severe injury of one's "private parts"
having a terrible accident and not dying
loss of independence (ability to care for
    oneself)
cut one's toes off mowing the lawn

**63. HAVING A NON-PERMANENT PHYSICAL INJURY**
break a leg
broken bones

**64. HAVING A NUCLEAR WORLD WAR BREAK OUT**
destroyed by nuclear weapons
nuclear World War III
end of the world
break out of war
war in one's home country (where
    family is)
thermonuclear war

**65. HAVING A POOR RELATIONSHIP WITH ONE'S CHILDREN**
fail to make one's children happy
unable to handle a problem with one's
    child(ren)
bad relationship with one's children

**66. HAVING AN IDENTITY CRISIS**
personal/identity crisis
no role models
unable to find a purpose for living
finding out one is adopted

**67. HAVING AN UNWANTED/UNPLANNED CHILD**
unwanted pregnancy
father an unplanned child
unintended pregnancy
childbirth before marriage
involvement in an unplanned
    pregnancy

**68. HAVING BAD PHYSICAL LOOKS THAT AFFECT ONE'S RELATIONSHIPS WITH OTHERS**
going through life fat and ugly
losing one's hair
bad physical looks ruining social
    interaction
becoming extremely fat and ugly
becoming fat, ugly, unkind and
    inconsiderate

## 69. HAVING LOW SELF-ESTEEM
capabilities unrecognized by society
having low self-esteem
image of being a "wimp"
loss of one's self-esteem

## 70. HAVING MILD SOCIAL/INTERPERSONAL PROBLEMS
personality conflict with someone
problems with friends (emotional
    stress)
unable to get along with people
being ignored by peers
experiencing unrequited love
social problems
family pressure for good grades
rejected by the other sex
severe argument with person of power
disappointment to one's parents
argument with partner/best friend
unable to communicate with people
unable to socialize well

## 71. HAVING MORE THAN ONE LOVED ONE DIE
death of family members/loved ones
death of parents
death of entire family
death of everyone one knows
loss of children
death of siblings
loss of all one's friends
accident causing loss of everything
    (family, home)
loss of child(ren) to disease/accident

## 72. HAVING MOST OR ALL ONE'S POSSESSIONS SERIOUS DAMAGED OR LOST
loss/destruction of possessions (by fire
    or theft)
loss of property (in
    fire/earthquake/flood)
house burns down and no insurance

loss of all one's property
loss of all one's belongings in a robbery
    of one's home

## 73. HAVING ONE OR MORE LOVED ONE(S) WITH SERIOUS ILLNESS/DISEASE
family member having cancer
close family member with some disease

## 74. HAVING ONE OR MORE LOVED ONES ADDICTED OR DEPENDENT ON DRUGS/ALCOHOL
partner becomes alcohol/drug
    dependent
child becomes involved in drugs/drug
    abuse
involvement of friend/family member
    with drugs

## 75. HAVING ONE OR MORE MINOR DISRUPTION(S) TO DESIRED OR PRESENT LIFESTYLE
unable to buy a Porsche
problems with transportation
high technology
forced to write out all one's papers by
    hand
not enough time to sleep
car repairs
closure of cinemas

## 76. HAVING ONE'S CHILD ABDUCTED BY SOMEONE
child(ren) abducted or killed

## 77. HAVING ONE'S CHILD ABUSED BY SOMEONE
child abused by someone

## 78. HAVING ONE'S CHILD INJURED
injury of child

**79. HAVING ONE'S CHILD TAKEN AWAY BY SOMEONE**

    having a child and having it taken
       away

**80. HAVING ONE'S PARENTS DIVORCE**

    parents' divorce

**81. HAVING SEVERE SOCIAL/INTERPERSONAL PROBLEMS (NO FRIENDS/SOCIALLY OUTCAST)**

    being outcast by everyone one knows
    unable to make friends/find a lover
    being loveless (no one close)
    no friends and social life
    never finding a constant companion
    never finding someone to love
    alienated from society
    unable to make friends or be happy
    not having a family of one's own
    fewer and fewer friends

**82. HAVING SOME PRIZED POSSESSION/PERSONAL PROPERTY SERIOUSLY DAMAGED OR LOST**

    loss of most valuable possession
    loss of property

**83. LOSING A BABY THROUGH MISCARRIAGE**

    miscarriage

**84. LOSING A PET**

    loss of a pet

**85. LOSING ONE'S FAITH**

    loss of faith
    falsification of one's strong beliefs
    false beliefs discovered to be false

**86. LOSING OR BEING FIRED FROM AN IMPORTANT CAREER JOB**

    loss of a coveted job
    loss of an important job
    fired from job one loves
    loss of career

**87. LOSING OR BEING FIRED FROM A JOB**

    lose job
    fired for carelessness
    job lost through honest mistake

**88. MAKING A MAJOR CAREER-PLANNING MISTAKE**

    mistakenly enter the wrong field
    choosing the wrong career
    mistaken career plan/must return to
      school

# APPENDIX B

## FIRST VERSION OF A NEW ATTRIBUTIONAL STYLE TEST

Reasons for Misfortunes

The items on the following pages present specific outcomes that might happen to anyone. For each item, think about how such things usually happen to people (*to other people, not to yourself*) and then write down the one reason that seems most plausible. That is, for each item, think over what you know about the world, to answer the question, "how does an outcome like this usually happen to someone (excluding myself)?". Then, try to express the reason for the outcome in a single sentence. Then, rate the cause on each of the nine scales provided by circling *one* number on each scale.

To summarize, for each of the 20 outcomes, you should
      1) think over what you know about how such an outcome happens to people
          (to others, not to yourself)
      2) write down the *one* major cause of that outcome
      3) rate the cause by circling *one* number on each of the nine scales provided

Please answer ALL of the questions. Keep in mind that **there are no right or wrong answers**. You are, of course, free to stop participating at any time.

1. Blindness.

major cause: _____

Think about the reason you have written above. The items below concern your impressions or opinions of this cause of the outcome. Circle one number for each of the following scales.

A. Is the cause something that:
Reflects an aspect of a blind person    9   8   7   6   5   4   3   2   1    Reflects an aspect of a situation

B. Is the cause:
Controllable by a blind person or other people    9   8   7   6   5   4   3   2   1    Uncontrollable by a blind person or other people

C. Is the cause something that is:
Permanent    9   8   7   6   5   4   3   2   1    Temporary

D. Is the cause something:
Intended by a blind person or other people    9   8   7   6   5   4   3   2   1    Unintended by a blind person or other people

E. Is the cause something that is:
Outside a blind person    1   2   3   4   5   6   7   8   9    Inside a blind person

F. Is the cause something that is:
Variable over time    1   2   3   4   5   6   7   8   9    Stable over time

G. Is the cause something:
About a blind person    9   8   7   6   5   4   3   2   1    About others

H. Is the cause something that is:
Changeable    1   2   3   4   5   6   7   8   9    Unchanging

I. Is the cause something for which:
No one is responsible    1   2   3   4   5   6   7   8   9    Someone is responsible


2. Cancer.

major cause: _____

Think about the reason you have written above. The items below concern your impressions or opinions of this cause of the outcome. Circle one number for each of the following scales.

A. Is the cause something that:
Reflects an aspect of a person with cancer    9   8   7   6   5   4   3   2   1    Reflects an aspect of a situation

B. Is the cause:
Controllable by a person with cancer or by other people    9   8   7   6   5   4   3   2   1    Uncontrollable by a person with cancer or by other people

C. Is the cause something that is:
Permanent    9   8   7   6   5   4   3   2   1    Temporary

D. Is the cause something:
Intended by a person with cancer or by other people    9   8   7   6   5   4   3   2   1    Unintended by a person with cancer or by other people

E. Is the cause something that is:
Outside a person with cancer    1   2   3   4   5   6   7   8   9    Inside a person with cancer

F. Is the cause something that is:
Variable over time    1   2   3   4   5   6   7   8   9    Stable over time

G. Is the cause something:
About a person with cancer    9   8   7   6   5   4   3   2   1    About others

H. Is the cause something that is:
Changeable    1   2   3   4   5   6   7   8   9    Unchanging

I. Is the cause something for which:
No one is responsible    1   2   3   4   5   6   7   8   9    Someone is responsible

3. Bankruptcy.

major cause: _____

Think about the reason you have written above. The items below concern your impressions or opinions of this cause of the outcome. Circle one number for each of the following scales.

A. Is the cause something that:
Reflects an aspect of a    9   8   7   6   5   4   3   2   1    Reflects an aspect of
bankrupt person                                         a situation

B. Is the cause:
Controllable by a bankrupt    9   8   7   6   5   4   3   2   1    Uncontrollable by a bankrupt
person or by other people                              person or by other people

C. Is the cause something that is:
Permanent             9   8   7   6   5   4   3   2   1    Temporary

D. Is the cause something:
Intended by a bankrupt person   9   8   7   6   5   4   3   2   1    Unintended by a bankrupt person
or by other people                               or by other people

E. Is the cause something that is:
Outside a bankrupt person    1   2   3   4   5   6   7   8   9    Inside a bankrupt person

F. Is the cause something that is:
Variable over time      1   2   3   4   5   6   7   8   9    Stable over time

G. Is the cause something:
About a bankrupt person    9   8   7   6   5   4   3   2   1    About others

H. Is the cause something that is:
Changeable        1   2   3   4   5   6   7   8   9    Unchanging

I. Is the cause something for which:
No one is responsible    1   2   3   4   5   6   7   8   9    Someone is responsible


4. Personality clash with employer or boss.

major cause: _____

Think about the reason you have written above. The items below concern your impressions or opinions of this cause of the outcome. Circle one number for each of the following scales.

A. Is the cause something that:
Reflects an aspect of a person   9   8   7   6   5   4   3   2   1    Reflects an aspect of
who clashed with their boss                              a situation

B. Is the cause:
Controllable by a person who   9   8   7   6   5   4   3   2   1    Uncontrollable by a person who
clashed with their boss, or                            clashed with their boss, or by
by other people                                    other people

C. Is the cause something that is:
Permanent             9   8   7   6   5   4   3   2   1    Temporary

D. Is the cause something:
Intended by a person who clashed   9   8   7   6   5   4   3   2   1    Unintended by a person who
with their boss or by others                            clashed with their boss or by others

E. Is the cause something that is:
Outside a person who clashed   1   2   3   4   5   6   7   8   9    Inside a person who clashed
with their boss                                  with their boss

F. Is the cause something that is:
Variable over time      1   2   3   4   5   6   7   8   9    Stable over time

G. Is the cause something:
About a person who clashed    9   8   7   6   5   4   3   2   1    About others
with their boss

H. Is the cause something that is:
Changeable        1   2   3   4   5   6   7   8   9    Unchanging

I. Is the cause something for which:
No one is responsible    1   2   3   4   5   6   7   8   9    Someone is responsible

5. Loss of an arm.

major cause: _____

Think about the reason you have written above. The items below concern your impressions or opinions of this cause of the outcome. Circle one number for each of the following scales.

A. Is the cause something that:
Reflects an aspect of a    9  8  7  6  5  4  3  2  1    Reflects an aspect of
person who lost an arm                                   a situation

B. Is the cause:
Controllable by a person who    9  8  7  6  5  4  3  2  1    Uncontrollable by a person who
lost an arm or by others                                     lost an arm or by others

C. Is the cause something that is:
Permanent    9  8  7  6  5  4  3  2  1    Temporary

D. Is the cause something:
Intended by a person who lost    9  8  7  6  5  4  3  2  1    Unintended by a person who lost
an arm or by other people                                    an arm or by other people

E. Is the cause something that is:
Outside a person who lost an arm  1  2  3  4  5  6  7  8  9    Inside a person who lost an arm

F. Is the cause something that is:
Variable over time    1  2  3  4  5  6  7  8  9    Stable over time

G. Is the cause something:
About a person who lost an arm    9  8  7  6  5  4  3  2  1    About others

H. Is the cause something that is:
Changeable    1  2  3  4  5  6  7  8  9    Unchanging

I. Is the cause something for which:
No one is responsible    1  2  3  4  5  6  7  8  9    Someone is responsible


6. Acquired Immune Deficiency Syndrome (AIDS).

major cause: _____

Think about the reason you have written above. The items below concern your impressions or opinions of this cause of the outcome. Circle one number for each of the following scales.

A. Is the cause something that:
Reflects an aspect of a    9  8  7  6  5  4  3  2  1    Reflects an aspect of
person with AIDS                                         a situation

B. Is the cause:
Controllable by a person    9  8  7  6  5  4  3  2  1    Uncontrollable by a person
with AIDS or by other people                             with AIDS or by other people

C. Is the cause something that is:
Permanent    9  8  7  6  5  4  3  2  1    Temporary

D. Is the cause something:
Intended by a person with AIDS    9  8  7  6  5  4  3  2  1    Unintended by a person with
or by other people                                           AIDS or by other people

E. Is the cause something that is:
Outside a person with AIDS    1  2  3  4  5  6  7  8  9    Inside a person with AIDS

F. Is the cause something that is:
Variable over time    1  2  3  4  5  6  7  8  9    Stable over time

G. Is the cause something:
About a person with AIDS    9  8  7  6  5  4  3  2  1    About others

H. Is the cause something that is:
Changeable    1  2  3  4  5  6  7  8  9    Unchanging

I. Is the cause something for which:
No one is responsible    1  2  3  4  5  6  7  8  9    Someone is responsible

7. Homelessness.

major cause: _____

Think about the reason you have written above. The items below concern your impressions or opinions of this cause of the outcome. Circle one number for each of the following scales.

A. Is the cause something that:
Reflects an aspect of a    9   8   7   6   5   4   3   2   1    Reflects an aspect of
    homeless person                                   a situation

B. Is the cause:
Controllable by a homeless   9   8   7   6   5   4   3   2   1    Uncontrollable by a homeless
   person or by other people                           person or by other people

C. Is the cause something that is:
         Permanent    9   8   7   6   5   4   3   2   1    Temporary

D. Is the cause something:
Intended by a homeless person   9   8   7   6   5   4   3   2   1    Unintended by a homeless person
    or by other people                               or by other people

E. Is the cause something that is:
Outside a homeless person    1   2   3   4   5   6   7   8   9    Inside a homeless person

F. Is the cause something that is:
     Variable over time    1   2   3   4   5   6   7   8   9    Stable over time

G. Is the cause something:
    About a homeless person    9   8   7   6   5   4   3   2   1    About others

H. Is the cause something that is:
      Changeable    1   2   3   4   5   6   7   8   9    Unchanging

I. Is the cause something for which:
   No one is responsible    1   2   3   4   5   6   7   8   9    Someone is responsible


8. Ignored by peers.

major cause: _____

Think about the reason you have written above. The items below concern your impressions or opinions of this cause of the outcome. Circle one number for each of the following scales.

A. Is the cause something that:
Reflects an aspect of a person   9   8   7   6   5   4   3   2   1    Reflects an aspect of
   who is ignored by peers                            a situation

B. Is the cause:
Controllable by a person who is   9   8   7   6   5   4   3   2   1    Uncontrollable by a person who is
     ignored by peers, or                           ignored by peers, or
    controllable by others                           uncontrollable by others

C. Is the cause something that is:
         Permanent    9   8   7   6   5   4   3   2   1    Temporary

D. Is the cause something:
Intended by a person who is    9   8   7   6   5   4   3   2   1    Unintended by a person who is
    ignored by peers or                           ignored by peers, or
    intended by others                           unintended by others

E. Is the cause something that is:
Outside a person who is    1   2   3   4   5   6   7   8   9    Inside a person who is
    ignored by peers                           ignored by peers

F. Is the cause something that is:
     Variable over time    1   2   3   4   5   6   7   8   9    Stable over time

G. Is the cause something:
    About a person who is    9   8   7   6   5   4   3   2   1    About others
    ignored by peers

H. Is the cause something that is:
      Changeable    1   2   3   4   5   6   7   8   9    Unchanging

I. Is the cause something for which:
   No one is responsible    1   2   3   4   5   6   7   8   9    Someone is responsible

9. Permanent paralysis from the waist down (paraplegia).

major cause: _____

Think about the reason you have written above. The items below concern your impressions or opinions of this cause of the outcome. Circle one number for each of the following scales.

A. Is the cause something that:
Reflects an aspect of a    9   8   7   6   5   4   3   2   1    Reflects an aspect of
     paralyzed person                                              a situation

B. Is the cause:
Controllable by a paralyzed    9   8   7   6   5   4   3   2   1    Uncontrollable by a paralyzed
     person or by other people                                        person or by other people

C. Is the cause something that is:
            Permanent    9   8   7   6   5   4   3   2   1    Temporary

D. Is the cause something:
Intended by a paralyzed    9   8   7   6   5   4   3   2   1    Unintended by a paralyzed
     person or by other people                                     person or other people

E. Is the cause something that is:
Outside a paralyzed person    1   2   3   4   5   6   7   8   9    Inside a paralyzed person

F. Is the cause something that is:
       Variable over time    1   2   3   4   5   6   7   8   9    Stable over time

G. Is the cause something:
     About a paralyzed person    9   8   7   6   5   4   3   2   1    About others

H. Is the cause something that is:
         Changeable    1   2   3   4   5   6   7   8   9    Unchanging

I. Is the cause something for which:
     No one is responsible    1   2   3   4   5   6   7   8   9    Someone is responsible


10. Heart attack.

major cause: _____

Think about the reason you have written above. The items below concern your impressions or opinions of this cause of the outcome. Circle one number for each of the following scales.

A. Is the cause something that:
Reflects an aspect of a person    9   8   7   6   5   4   3   2   1    Reflects an aspect of
     who had a heart attack                                          a situation

B. Is the cause:
Controllable by a person who    9   8   7   6   5   4   3   2   1    Uncontrollable by a person who
had a heart attack or by others                                   had a heart attack or by others

C. Is the cause something that is:
           Permanent    9   8   7   6   5   4   3   2   1    Temporary

D. Is the cause something:
Intended by a person who had    9   8   7   6   5   4   3   2   1    Unintended by a person who had a
     a heart attack or by others                                     heart attack or by others

E. Is the cause something that is:
Outside a person who had    1   2   3   4   5   6   7   8   9    Inside a person who had
       a heart attack                                          a heart attack

F. Is the cause something that is:
       Variable over time    1   2   3   4   5   6   7   8   9    Stable over time

G. Is the cause something:
About a person who had    9   8   7   6   5   4   3   2   1    About others
       a heart attack

H. Is the cause something that is:
         Changeable    1   2   3   4   5   6   7   8   9    Unchanging

I. Is the cause something for which:
     No one is responsible    1   2   3   4   5   6   7   8   9    Someone is responsible

11. Loss of all possessions.

major cause: _____

Think about the reason you have written above. The items below concern your impressions or opinions of this cause of the outcome. Circle one number for each of the following scales.

A. Is the cause something that:
Reflects an aspect of a person   9  8  7  6  5  4  3  2  1    Reflects an aspect of
    who lost everything                                         a situation

B. Is the cause:
Controllable by a person who   9  8  7  6  5  4  3  2  1    Uncontrollable by a person who
lost everything, or controllable                                 lost everything, or
    by other people                                   uncontrollable by other people

C. Is the cause something that is:
    Permanent          9  8  7  6  5  4  3  2  1    Temporary

D. Is the cause something:
Intended by a person who lost   9  8  7  6  5  4  3  2  1    Unintended by a person who lost
  everything, or intended by                                 everything, or unintended by
    other people                                   other people

E. Is the cause something that is:
  Outside a person who lost   1  2  3  4  5  6  7  8  9    Inside a person who lost
    everything                                   everything

F. Is the cause something that is:
    Variable over time   1  2  3  4  5  6  7  8  9    Stable over time

G. Is the cause something:
  About a person who lost   9  8  7  6  5  4  3  2  1    About others
    everything

H. Is the cause something that is:
    Changeable   1  2  3  4  5  6  7  8  9    Unchanging

I. Is the cause something for which:
  No one is responsible   1  2  3  4  5  6  7  8  9    Someone is responsible


12. Friendlessness.

major cause: _____

Think about the reason you have written above. The items below concern your impressions or opinions of this cause of the outcome. Circle one number for each of the following scales.

A. Is the cause something that:
    Reflects an aspect of a   9  8  7  6  5  4  3  2  1    Reflects an aspect of
    friendless person                                   a situation

B. Is the cause:
  Controllable by a friendless   9  8  7  6  5  4  3  2  1    Uncontrollable by a friendless
    person or other people                               person or other people

C. Is the cause something that is:
    Permanent   9  8  7  6  5  4  3  2  1    Temporary

D. Is the cause something:
  Intended by a friendless   9  8  7  6  5  4  3  2  1    Unintended by a friendless
  person or by other people                               person or by other people

E. Is the cause something that is:
  Outside a friendless person   1  2  3  4  5  6  7  8  9    Inside a friendless person

F. Is the cause something that is:
    Variable over time   1  2  3  4  5  6  7  8  9    Stable over time

G. Is the cause something:
  About a friendless person   9  8  7  6  5  4  3  2  1    About others

H. Is the cause something that is:
    Changeable   1  2  3  4  5  6  7  8  9    Unchanging

I. Is the cause something for which:
  No one is responsible   1  2  3  4  5  6  7  8  9    Someone is responsible

13. Loss of the ability to speak.

major cause: _____

Think about the reason you have written above. The items below concern your impressions or opinions of this cause of the outcome. Circle one number for each of the following scales.

A. Is the cause something that:
Reflects an aspect of a    9   8   7   6   5   4   3   2   1    Reflects an aspect of
     mute person                                             a situation

B. Is the cause:
   Controllable by a mute    9   8   7   6   5   4   3   2   1    Uncontrollable by a mute
person or by other people                                      person or by other people

C. Is the cause something that is:
         Permanent    9   8   7   6   5   4   3   2   1    Temporary

D. Is the cause something:
   Intended by a mute person    9   8   7   6   5   4   3   2   1    Unintended by a mute person
     or by other people                                        or by other people

E. Is the cause something that is:
   Outside a mute person    1   2   3   4   5   6   7   8   9    Inside a mute person

F. Is the cause something that is:
     Variable over time    1   2   3   4   5   6   7   8   9    Stable over time

G. Is the cause something:
     About a mute person    9   8   7   6   5   4   3   2   1    About others

H. Is the cause something that is:
       Changeable    1   2   3   4   5   6   7   8   9    Unchanging

I. Is the cause something for which:
   No one is responsible    1   2   3   4   5   6   7   8   9    Someone is responsible


14. Brain tumor.

major cause: _____

Think about the reason you have written above. The items below concern your impressions or opinions of this cause of the outcome. Circle one number for each of the following scales.

A. Is the cause something that:
Reflects an aspect of a    9   8   7   6   5   4   3   2   1    Reflects an aspect of
person with a brain tumor                                    a situation

B. Is the cause:
Controllable by a person with    9   8   7   6   5   4   3   2   1    Uncontrollable by a person with
     a brain tumor, or                                     a brain tumor, or
controllable by other people                                uncontrollable by other people

C. Is the cause something that is:
         Permanent    9   8   7   6   5   4   3   2   1    Temporary

D. Is the cause something:
   Intended by a person with a    9   8   7   6   5   4   3   2   1    Unintended by a person with a
   brain tumor, or intended                                   brain tumor, or unintended
     by other people                                       by other people

E. Is the cause something that is:
   Outside a person with a    1   2   3   4   5   6   7   8   9    Inside a person with a
      brain tumor                                        brain tumor

F. Is the cause something that is:
     Variable over time    1   2   3   4   5   6   7   8   9    Stable over time

G. Is the cause something:
     About a person with a    9   8   7   6   5   4   3   2   1    About others
       brain tumor

H. Is the cause something that is:
       Changeable    1   2   3   4   5   6   7   8   9    Unchanging

I. Is the cause something for which:
   No one is responsible    1   2   3   4   5   6   7   8   9    Someone is responsible

15. Poverty (of an individual in British Columbia).

major cause: _____

Think about the reason you have written above. The items below concern your impressions or opinions of this cause of the outcome. Circle one number for each of the following scales.

A. Is the cause something that:
Reflects an aspect of a    9   8   7   6   5   4   3   2   1    Reflects an aspect of
poor person                                                    a situation

B. Is the cause:
Controllable by a poor     9   8   7   6   5   4   3   2   1    Uncontrollable by a poor
person or by other people                                      person or by other people

C. Is the cause something that is:
Permanent                  9   8   7   6   5   4   3   2   1    Temporary

D. Is the cause something:
Intended by a poor person  9   8   7   6   5   4   3   2   1    Unintended by a poor person
or by other people                                             or by other people

E. Is the cause something that is:
Outside a poor person      1   2   3   4   5   6   7   8   9    Inside a poor person

F. Is the cause something that is:
Variable over time         1   2   3   4   5   6   7   8   9    Stable over time

G. Is the cause something:
About a poor person        9   8   7   6   5   4   3   2   1    About others

H. Is the cause something that is:
Changeable                 1   2   3   4   5   6   7   8   9    Unchanging

I. Is the cause something for which:
No one is responsible      1   2   3   4   5   6   7   8   9    Someone is responsible


16. Divorce.

major cause: _____

Think about the reason you have written above. The items below concern your impressions or opinions of this cause of the outcome. Circle one number for each of the following scales.

A. Is the cause something that:
Reflects an aspect of a    9   8   7   6   5   4   3   2   1    Reflects an aspect of
divorced person                                                a situation

B. Is the cause:
Controllable by a divorced 9   8   7   6   5   4   3   2   1    Uncontrollable by a divorced
person or by other people                                      person or by other people

C. Is the cause something that is:
Permanent                  9   8   7   6   5   4   3   2   1    Temporary

D. Is the cause something:
Intended by a divorced person  9  8  7  6  5  4  3  2  1    Unintended by a divorced person
or by other people                                             or by other people

E. Is the cause something that is:
Outside a divorced person  1   2   3   4   5   6   7   8   9    Inside a divorced person

F. Is the cause something that is:
Variable over time         1   2   3   4   5   6   7   8   9    Stable over time

G. Is the cause something:
About a divorced person    9   8   7   6   5   4   3   2   1    About others

H. Is the cause something that is:
Changeable                 1   2   3   4   5   6   7   8   9    Unchanging

I. Is the cause something for which:
No one is responsible      1   2   3   4   5   6   7   8   9    Someone is responsible

17. Facial disfigurement.

major cause: _____

Think about the reason you have written above. The items below concern your impressions or opinions of this cause of the outcome. Circle one number for each of the following scales.

A. Is the cause something that:
   Reflects an aspect of a facially disfigured person    9   8   7   6   5   4   3   2   1    Reflects an aspect of a situation

B. Is the cause:
   Controllable by a facially disfigured person or by othesr    9   8   7   6   5   4   3   2   1    Uncontrollable by a facially disfigured person or by others

C. Is the cause something that is:
   Permanent    9   8   7   6   5   4   3   2   1    Temporary

D. Is the cause something:
   Intended by a facially disfigured person or by others    9   8   7   6   5   4   3   2   1    Unintended by a facially disfigured person or by others

E. Is the cause something that is:
   Outside a facially disfigured person    1   2   3   4   5   6   7   8   9    Inside a facially disfigured person

F. Is the cause something that is:
   Variable over time    1   2   3   4   5   6   7   8   9    Stable over time

G. Is the cause something:
   About a facially disfigured person    9   8   7   6   5   4   3   2   1    About others

H. Is the cause something that is:
   Changeable    1   2   3   4   5   6   7   8   9    Unchanging

I. Is the cause something for which:
   No one is responsible    1   2   3   4   5   6   7   8   9    Someone is responsible


18. Kidney disease (KD), involving dialysis.

major cause: _____

Think about the reason you have written above. The items below concern your impressions or opinions of this cause of the outcome. Circle one number for each of the following scales.

A. Is the cause something that:
   Reflects an aspect of a person with KD    9   8   7   6   5   4   3   2   1    Reflects an aspect of a situation

B. Is the cause:
   Controllable by a person with KD or by other people    9   8   7   6   5   4   3   2   1    Uncontrollable by a person with KD or by other people

C. Is the cause something that is:
   Permanent    9   8   7   6   5   4   3   2   1    Temporary

D. Is the cause something:
   Intended by a person with KD or by other people    9   8   7   6   5   4   3   2   1    Unintended by a person with KD or by other people

E. Is the cause something that is:
   Outside a person with KD    1   2   3   4   5   6   7   8   9    Inside a person with KD

F. Is the cause something that is:
   Variable over time    1   2   3   4   5   6   7   8   9    Stable over time

G. Is the cause something:
   About a person with KD    9   8   7   6   5   4   3   2   1    About others

H. Is the cause something that is:
   Changeable    1   2   3   4   5   6   7   8   9    Unchanging

I. Is the cause something for which:
   No one is responsible    1   2   3   4   5   6   7   8   9    Someone is responsible

19. Malnutrition (of a person in British Columbia).

major cause: _____

Think about the reason you have written above. The items below concern your impressions or opinions of this cause of the outcome. Circle one number for each of the following scales.

A. Is the cause something that:
Reflects an aspect of a    9   8   7   6   5   4   3   2   1    Reflects an aspect of
malnourished person                                                               a situation

B. Is the cause:
Controllable by a malnourished    9   8   7   6   5   4   3   2   1    Uncontrollable by a malnourished
person or by other people                                              person or by other people

C. Is the cause something that is:
Permanent    9   8   7   6   5   4   3   2   1    Temporary

D. Is the cause something:
Intended by a malnourished    9   8   7   6   5   4   3   2   1    Unintended by a malnourished
person or by other people                                              person or by other people

E. Is the cause something that is:
Outside a malnourished person    1   2   3   4   5   6   7   8   9    Inside a malnourished person

F. Is the cause something that is:
Variable over time    1   2   3   4   5   6   7   8   9    Stable over time

G. Is the cause something:
About a malnourished person    9   8   7   6   5   4   3   2   1    About others

H. Is the cause something that is:
Changeable    1   2   3   4   5   6   7   8   9    Unchanging

I. Is the cause something for which:
No one is responsible    1   2   3   4   5   6   7   8   9    Someone is responsible


20. Loss of a best friend.

major cause: _____

Think about the reason you have written above. The items below concern your impressions or opinions of this cause of the outcome. Circle one number for each of the following scales.

A. Is the cause something that:
Reflects an aspect of a    9   8   7   6   5   4   3   2   1    Reflects an aspect of
person who lost a best friend                                                a situation

B. Is the cause:
Controllable by a person who    9   8   7   6   5   4   3   2   1    Uncontrollable by a person
lost a best friend, or                                              who lost a best friend, or
controllable by other people                                                uncontrollable by other people

C. Is the cause something that is:
Permanent    9   8   7   6   5   4   3   2   1    Temporary

D. Is the cause something:
Intended by a person who lost    9   8   7   6   5   4   3   2   1    Unintended by a person who lost
a best friend, or                                              a best friend, or unintended
intended by other people                                              by other people

E. Is the cause something that is:
Outside a person who lost    1   2   3   4   5   6   7   8   9    Inside a person who
a best friend                                                lost a best friend

F. Is the cause something that is:
Variable over time    1   2   3   4   5   6   7   8   9    Stable over time

G. Is the cause something:
About a person who lost    9   8   7   6   5   4   3   2   1    About others
a best friend

H. Is the cause something that is:
Changeable    1   2   3   4   5   6   7   8   9    Unchanging

I. Is the cause something for which:
No one is responsible    1   2   3   4   5   6   7   8   9    Someone is responsible

# APPENDIX C

# SECOND VERSION OF A NEW ATTRIBUTIONAL STYLE TEST

# Reasons for Misfortune

## INSTRUCTIONS:

The items on the following pages present specific misfortunes or problems that might happen to anyone. For each item, think about how such a thing could likely happen to someone (*other than yourself*) and then write down one plausible (likely) reason that comes to mind. That is, for each item, think over what you know about the world to answer the question, "*How does a problem like this happen to someone* (excluding myself)?" Then, try to express a plausible reason for the misfortune in a single sentence.

After writing down a likely cause for a misfortune, then *rate that cause* on each of the twelve scales provided by circling *one* number on each scale. *When doing the ratings, be sure to focus on the cause (that is, the reason for the onset) of the problem, NOT on the problem*. This may be difficult at times. In other words, *make sure you are rating the cause you write down* for a misfortune, and NOT the misfortune itself.

"*The person*" referred to in the rating questions means <u>the person who has the problem</u>; the term "*Other people*" referred to in the ratings means <u>anyone else</u> (that is, <u>anyone other than the person with the problem</u>).

Please take your time when doing the ratings - make sure you read the questions carefully. You may find that there is more than one way of interpreting some of the rating questions. Please interpret these questions in the way that is *most meaningful to you*. *There are no right or wrong answers to these questions.*

To summarize, *for each of the 6 misfortunes*, you should:

1) think over what you know about *how such a misfortune could likely happen to someone* (other than yourself).
2) **write down *one likely cause*** of that misfortune - try to *express the reason in one sentence*.
3) then, rate *that cause* by circling *one* number on each of the nine scales provided - each time you do the ratings, *be sure to focus on the cause you wrote down* (i.e., the reason for the problem), *NOT on the problem*.
4) if you find there is more than one way of interpreting a question, interpret it in a way that is *most meaningful to you*.
5) please read the questions carefully.

Please answer *all* the questions. It should take 10-15 minutes to finish this questionnaire. **You are, of course, free to stop participating at any time.**

WHAT IS YOUR AGE? ___          ARE YOU FEMALE? __ or MALE? __

**PLEASE ANSWER ALL OF THE QUESTIONS.** Keep in mind that **there are no right or wrong answers.** Please refer back to the instructions if you are unsure about what to do.

1. Cancer.
One likely cause: _____

*Think about the reason you have written above. The items below concern your impressions or opinions of this cause of the person's misfortune. Circle one number for each of the following questions.*

<u>*Is the cause something:*</u>

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| That reflects an aspect of the person | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Reflects an aspect of the situation |
| Manageable by the person | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Not manageable by the person |
| Permanent | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Temporary |
| The person can regulate | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | The person cannot regulate |
| Over which others have control | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Over which others have no control |
| Inside the person | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Outside the person |
| Stable over time | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Variable over time |
| Under the power of other people | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Not under the power of other people |
| About the person | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | About others |
| Over which the person has power | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Over which the person has no power |
| Unchangeable | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Changeable |
| Other people can regulate | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Other people cannot regulate |

2. Divorce.
One likely cause: _____

*Think about the reason you have written above. The items below concern your impressions or opinions of this cause of the person's misfortune. Circle one number for each of the following questions.*

<u>*Is the cause something:*</u>

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| That reflects an aspect of the person | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Reflects an aspect of the situation |
| Manageable by the person | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Not manageable by the person |
| Permanent | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Temporary |
| The person can regulate | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | The person cannot regulate |
| Over which others have control | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Over which others have no control |
| Inside the person | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Outside the person |
| Stable over time | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Variable over time |
| Under the power of other people | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Not under the power of other people |
| About the person | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | About others |
| Over which the person has power | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Over which the person has no power |
| Unchangeable | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Changeable |
| Other people can regulate | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Other people cannot regulate |

3. Bankruptcy.
One likely cause: _____

*Think about the reason you have written above. The items below concern your impressions or opinions of this cause of the person's misfortune. Circle one number for each of the following questions.*

*Is the cause something:*

| That reflects an aspect of the person | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Reflects an aspect of the situation |
|---|---|---|---|---|---|---|---|---|---|---|
| Manageable by the person | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Not manageable by the person |
| Permanent | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Temporary |
| The person can regulate | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | The person cannot regulate |
| Over which others have control | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Over which others have no control |
| Inside the person | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Outside the person |
| Stable over time | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Variable over time |
| Under the power of other people | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Not under the power of other people |
| About the person | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | About others |
| Over which the person has power | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Over which the person has no power |
| Unchangeable | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Changeable |
| Other people can regulate | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Other people cannot regulate |

4. Facial disfigurement.
One likely cause: _____

*Think about the reason you have written above. The items below concern your impressions or opinions of this cause of the person's misfortune. Circle one number for each of the following questions.*

*Is the cause something:*

| That reflects an aspect of the person | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Reflects an aspect of the situation |
|---|---|---|---|---|---|---|---|---|---|---|
| Manageable by the person | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Not manageable by the person |
| Permanent | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Temporary |
| The person can regulate | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | The person cannot regulate |
| Over which others have control | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Over which others have no control |
| Inside the person | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Outside the person |
| Stable over time | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Variable over time |
| Under the power of other people | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Not under the power of other people |
| About the person | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | About others |
| Over which the person has power | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Over which the person has no power |
| Unchangeable | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Changeable |
| Other people can regulate | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Other people cannot regulate |

5. Has no friends.
One likely cause: _____

*Think about the reason you have written above. The items below concern your impressions or opinions of this cause of the person's misfortune. Circle one number for each of the following questions.*

<u>*Is the cause something:*</u>

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| That reflects an aspect of the person | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Reflects an aspect of the situation |
| Manageable by the person | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Not manageable by the person |
| Permanent | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Temporary |
| The person can regulate | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | The person cannot regulate |
| Over which others have control | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Over which others have no control |
| Inside the person | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Outside the person |
| Stable over time | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Variable over time |
| Under the power of other people | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Not under the power of other people |
| About the person | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | About others |
| Over which the person has power | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Over which the person has no power |
| Unchangeable | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Changeable |
| Other people can regulate | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Other people cannot regulate |

6. Loss of all possessions.
One likely cause: _____

*Think about the reason you have written above. The items below concern your impressions or opinions of this cause of the person's misfortune. Circle one number for each of the following questions.*

<u>*Is the cause something:*</u>

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| That reflects an aspect of the person | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Reflects an aspect of the situation |
| Manageable by the person | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Not manageable by the person |
| Permanent | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Temporary |
| The person can regulate | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | The person cannot regulate |
| Over which others have control | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Over which others have no control |
| Inside the person | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Outside the person |
| Stable over time | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Variable over time |
| Under the power of other people | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Not under the power of other people |
| About the person | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | About others |
| Over which the person has power | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Over which the person has no power |
| Unchangeable | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Changeable |
| Other people can regulate | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | Other people cannot regulate |

Thank you for participating.

# APPENDIX D

# RESULTS OF PRINCIPAL COMPONENTS ANALYSES

## CAUSAL DIMENSION SUBSCALES: STUDY 2

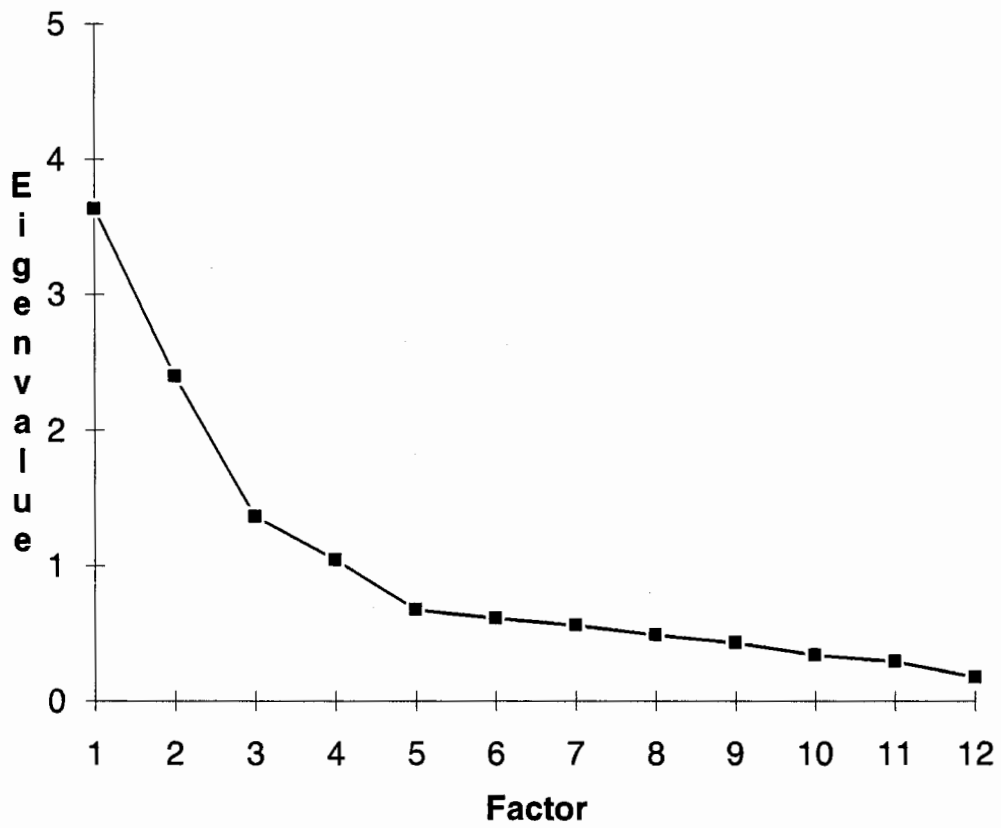Figure D-1. Scree test for factor cutoff: CANCER, STUDY 2

Table D-1

*Rotated factor loadings of rating items measuring the perceived causes of CANCER: Study 2*

| ITEM | FACTOR 1 PC | FACTOR 2 EC | FACTOR 3 LC | FACTOR 4 ST |
|------|-------------|-------------|-------------|-------------|
| 1 | 0.544 | -0.059 | **0.501** | 0.031 |
| 2 | **0.907** | 0.007 | 0.010 | -0.055 |
| 3 | -0.481 | 0.023 | 0.211 | **0.547** |
| 4 | **0.868** | -0.009 | 0.057 | 0.016 |
| 5 | 0.051 | **0.828** | -0.129 | -0.044 |
| 6 | -0.188 | -0.085 | **0.844** | 0.079 |
| 7 | 0.108 | 0.031 | -0.063 | **0.881** |
| 8 | -0.037 | **0.769** | -0.164 | 0.188 |
| 9 | 0.304 | -0.309 | **0.621** | -0.070 |
| 10 | **0.873** | -0.072 | 0.051 | -0.066 |
| 11 | -0.605 | -0.049 | 0.061 | **0.545** |
| 12 | -0.065 | **0.872** | -0.025 | -0.098 |
| VE | 28% | 18% | 12% | 11.9% |

Note:   Items 1, 6, 9 = LOCUS OF CAUSALITY

Items 2, 4, 10 = PERSONAL CONTROL

Items 3, 7, 11 = STABILITY

Items 5, 8, 12 = EXTERNAL CONTROL

VE = Variance explained by factor

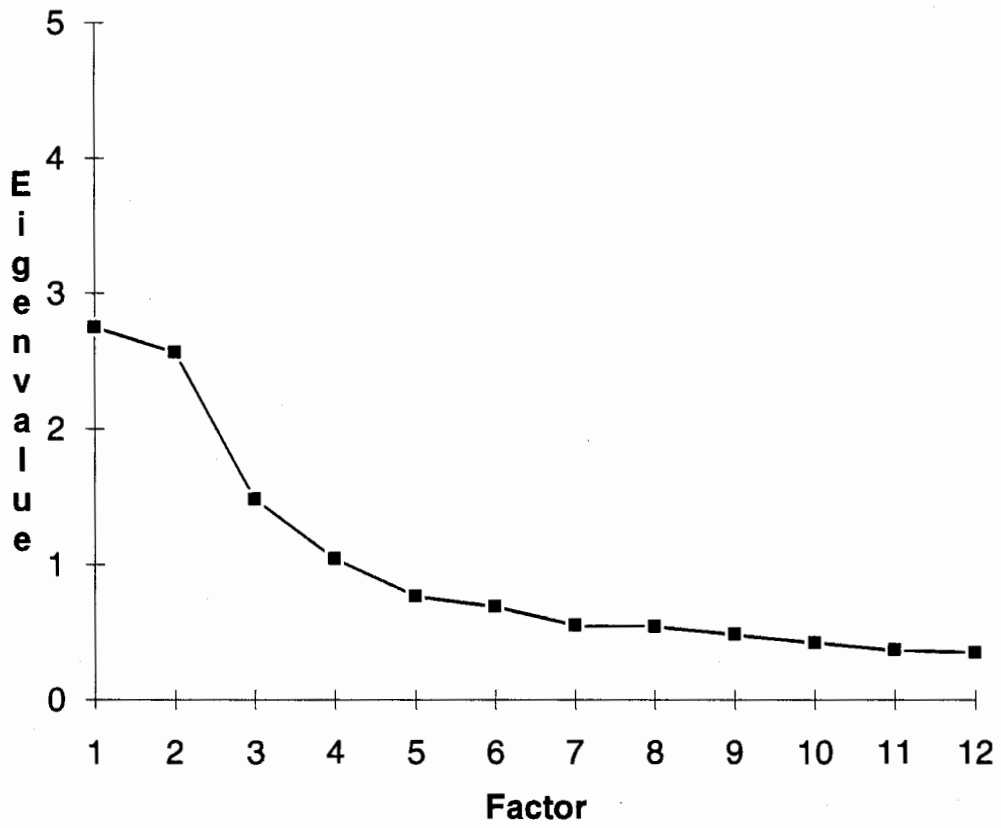Figure D-2. Scree test for factor cutoff: DIVORCE,
STUDY 2

Table D-2

*Rotated factor loadings of rating items measuring the perceived causes of DIVORCE: Study 2*

| ITEM | FACTOR 1 EC | FACTOR 2 PC | FACTOR 3 ST | FACTOR 4 LC |
|---|---|---|---|---|
| 1 | 0.139 | 0.190 | 0.020 | **0.680** |
| 2 | 0.013 | **0.837** | -0.114 | 0.140 |
| 3 | -0.164 | -0.093 | **0.821** | -0.001 |
| 4 | 0.026 | **0.813** | -0.170 | 0.110 |
| 5 | **0.833** | 0.032 | -0.121 | -0.010 |
| 6 | -0.186 | 0.055 | 0.053 | **0.794** |
| 7 | 0.109 | -0.143 | **0.674** | 0.264 |
| 8 | **0.789** | 0.053 | -0.022 | -0.091 |
| 9 | -0.395 | 0.158 | -0.008 | **0.614** |
| 10 | -0.032 | **0.841** | -0.083 | 0.115 |
| 11 | -0.106 | -0.123 | **0.773** | -0.129 |
| 12 | **0.807** | -0.057 | -0.037 | -0.102 |
| VE | 19% | 18% | 15% | 13% |

Note:     Items 1, 6, 9 = LOCUS OF CAUSALITY

Items 2, 4, 10 = PERSONAL CONTROL

Items 3, 7, 11 = STABILITY

Items 5, 8, 12 = EXTERNAL CONTROL

VE = Variance explained by factor

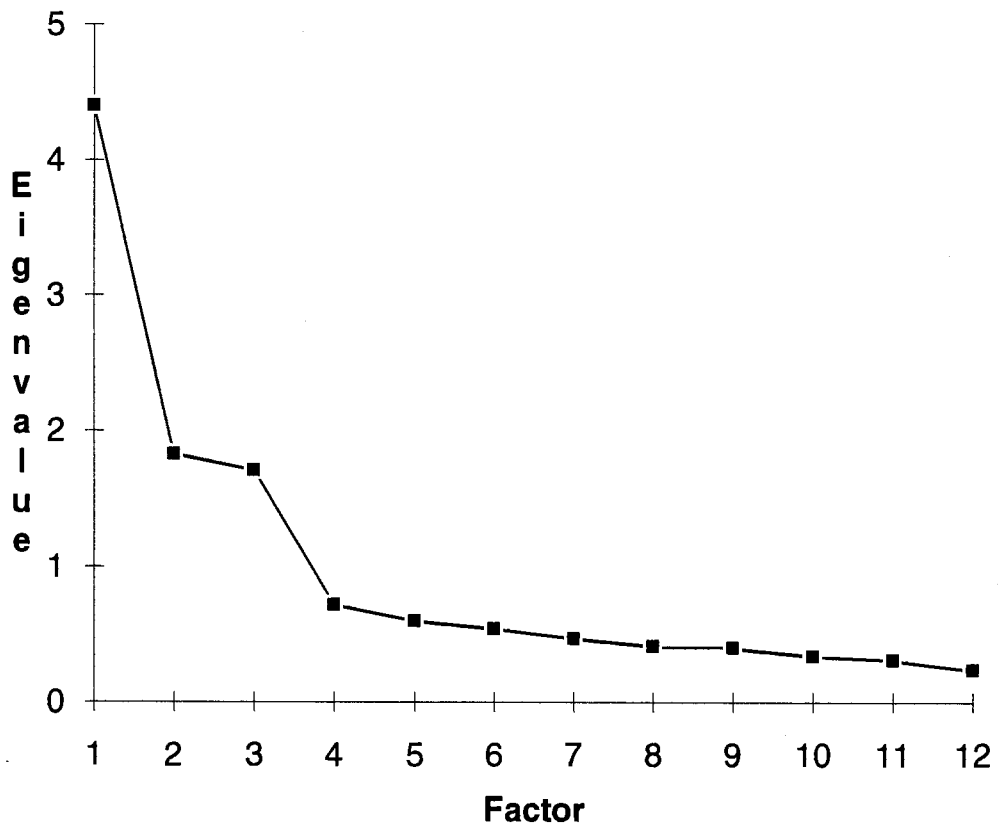Figure D-3. Scree test for factor cutoff: BANKRUPTCY, STUDY 2

Table D-3

*Rotated factor loadings of rating items measuring the perceived causes of BANKRUPTCY:*

*Study 2*

| ITEM | FACTOR 1 PC/LC | FACTOR 2 EC | FACTOR 3 ST |
|------|------|------|------|
| 1 | **0.777** | -0.145 | 0.152 |
| 2 | **0.827** | -0.041 | -0.110 |
| 3 | 0.028 | 0.004 | **0.814** |
| 4 | **0.833** | -0.048 | -0.172 |
| 5 | -0.078 | **0.852** | 0.106 |
| 6 | **0.686** | -0.207 | 0.250 |
| 7 | 0.271 | 0.057 | **0.717** |
| 8 | -0.205 | **0.836** | 0.015 |
| 9 | **0.746** | -0.344 | 0.048 |
| 10 | **0.812** | -0.099 | -0.035 |
| 11 | -0.342 | 0.011 | **0.682** |
| 12 | -0.145 | **0.779** | -0.047 |
| VE | 32.7% | 18.6% | 15% |

Note:     Items 1, 6, 9 = LOCUS OF CAUSALITY

Items 2, 4, 10 = PERSONAL CONTROL

Items 3, 7, 11 = STABILITY

Items 5, 8, 12 = EXTERNAL CONTROL

VE = Variance explained by factor

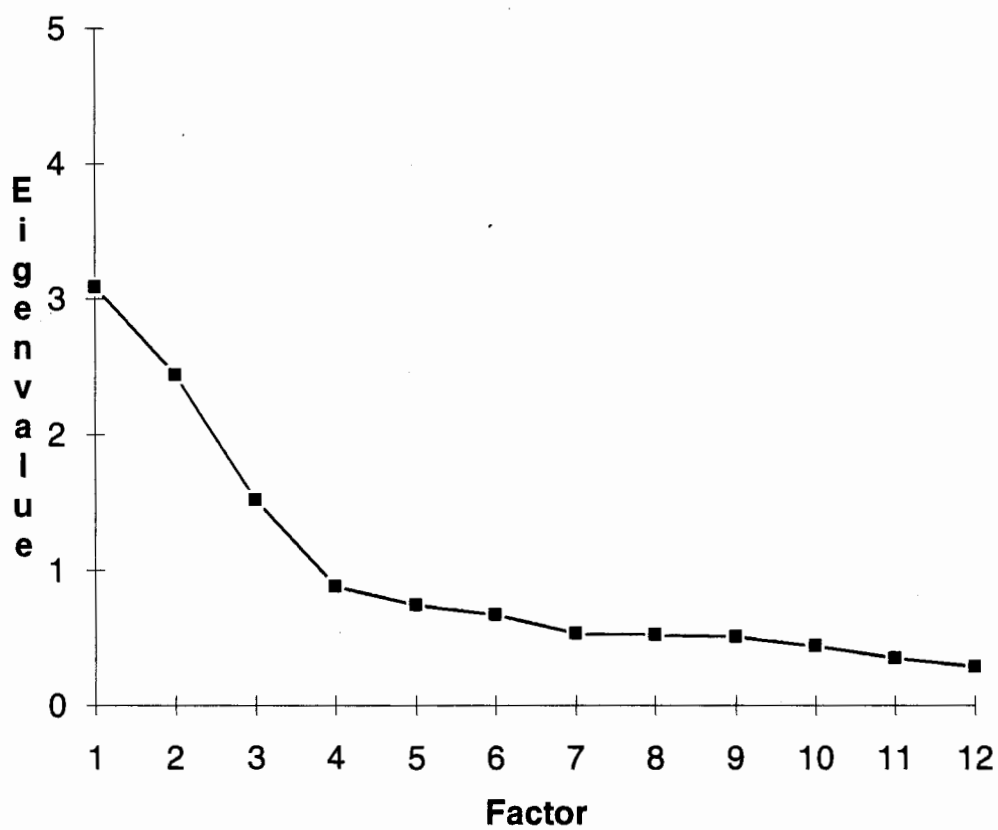Figure D-4. Scree test for factor cutoff: FACIAL DISFIGUREMENT, STUDY 2

Table D-4

*Rotated factor loadings of rating items measuring the perceived causes of FACIAL*

*DISFIGUREMENT: Study 2*

| ITEM | FACTOR 1 PC/LC | FACTOR 2 EC | FACTOR 3 ST |
|------|------|------|------|
| 1 | **0.646** | -0.061 | 0.041 |
| 2 | **0.737** | 0.105 | -0.243 |
| 3 | 0.009 | 0.051 | **0.822** |
| 4 | **0.757** | 0.221 | -0.194 |
| 5 | 0.045 | **0.847** | -0.048 |
| 6 | **0.648** | -0.092 | 0.209 |
| 7 | 0.027 | -0.118 | **0.682** |
| 8 | -0.002 | **0.877** | -0.081 |
| 9 | **0.538** | -0.366 | 0.364 |
| 10 | **0.624** | 0.183 | -0.352 |
| 11 | -0.200 | -0.142 | **0.652** |
| 12 | 0.062 | **0.788** | -0.103 |
| VE | 22% | 19.8% | 16.5% |

Note:   Items 1, 6, 9 = LOCUS OF CAUSALITY

Items 2, 4, 10 = PERSONAL CONTROL

Items 3, 7, 11 = STABILITY

Items 5, 8, 12 = EXTERNAL CONTROL

VE = Variance explained by factor

Figure D-5. Scree test for factor cutoff:
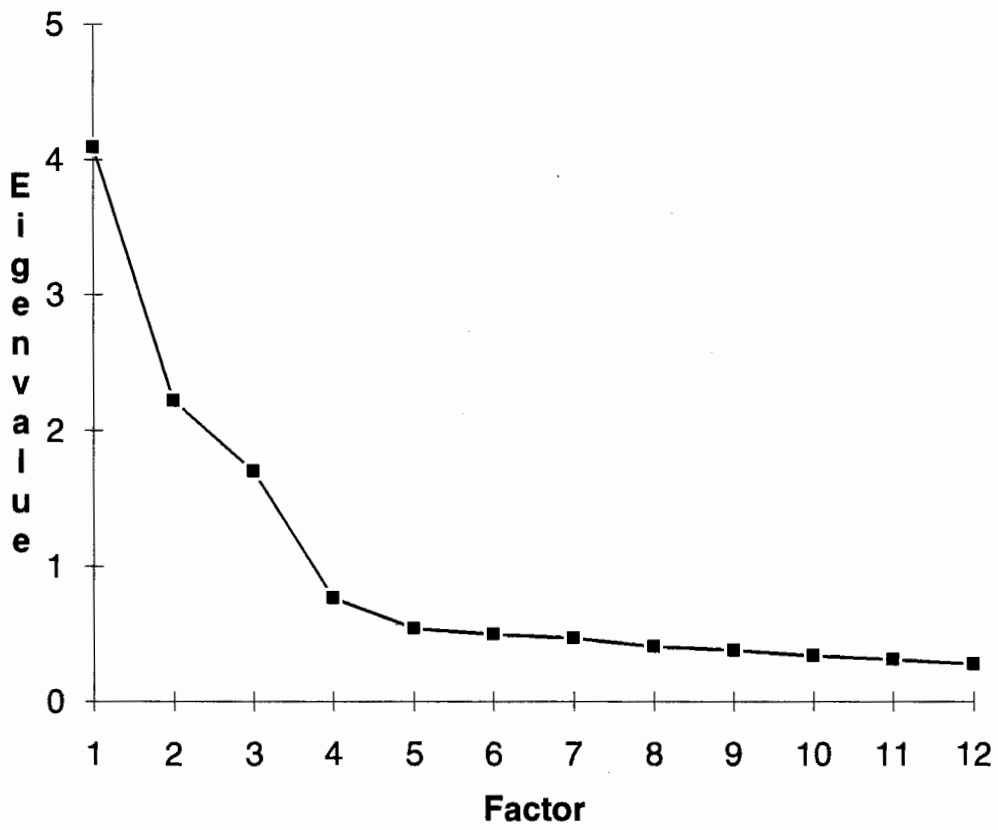FRIENDLESSNESS, STUDY 2

Table D-5

*Rotated factor loadings of rating items measuring the perceived causes of*

*FRIENDLESSNESS: Study 2*

| ITEM | FACTOR 1 PC | FACTOR 2 EC | FACTOR 3 ST | FACTOR 4 LC |
|------|------|------|------|------|
| 1 | 0.445 | -0.265 | 0.141 | **0.618** |
| 2 | **0.844** | -0.052 | -0.077 | 0.246 |
| 3 | -0.153 | -0.036 | **0.809** | 0.059 |
| 4 | **0.822** | -0.022 | -0.134 | 0.263 |
| 5 | -0.073 | **0.872** | -0.037 | -0.130 |
| 6 | 0.226 | -0.027 | -0.007 | **0.840** |
| 7 | 0.126 | 0.052 | **0.819** | 0.120 |
| 8 | -0.109 | **0.865** | 0.036 | -0.152 |
| 9 | 0.211 | -0.322 | 0.054 | **0.756** |
| 10 | **0.824** | -0.202 | -0.133 | 0.153 |
| 11 | -0.303 | -0.033 | **0.755** | -0.097 |
| 12 | -0.069 | **0.819** | -0.007 | -0.110 |
| VE | 21% | 20% | 16% | 15.8% |

Note:    Items 1, 6, 9 = LOCUS OF CAUSALITY

             Items 2, 4, 10 = PERSONAL CONTROL

             Items 3, 7, 11 = STABILITY

             Items 5, 8, 12 = EXTERNAL CONTROL

VE = Variance explained by factor

Figure D-6. Scree test for factor cutoff: LOSS OF ALL POSSESSIONS, STUDY 2
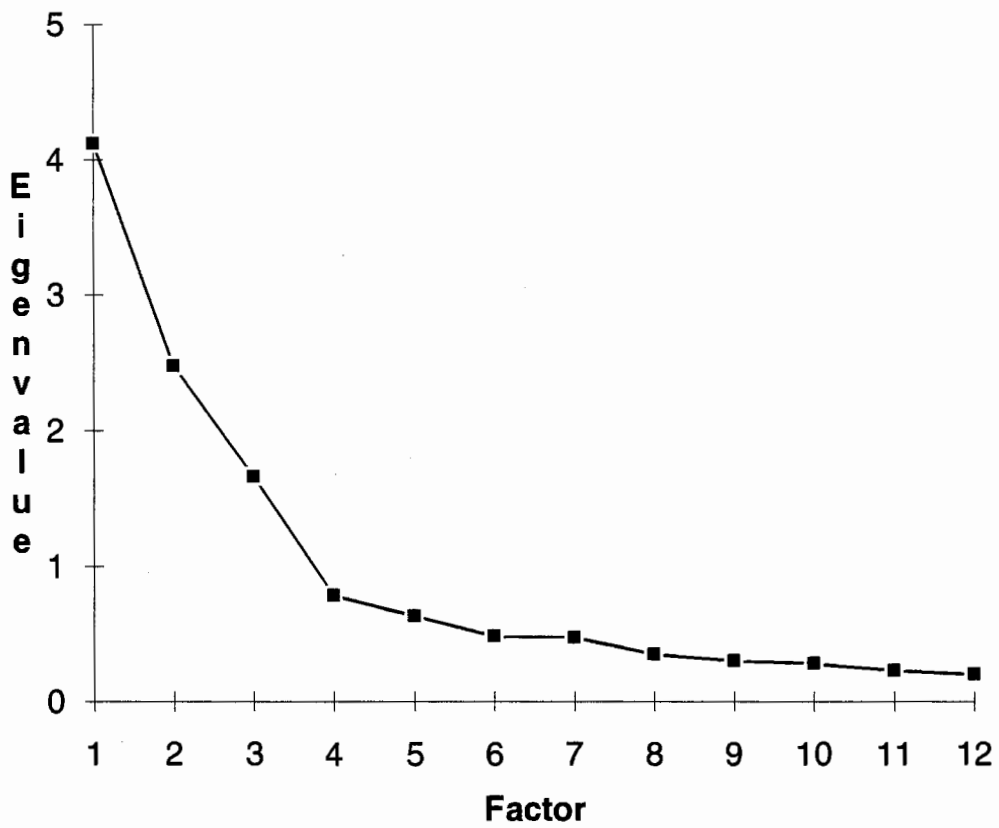
Table D-6

*Rotated factor loadings of rating items measuring the perceived causes of LOSS OF ALL*

*POSSESSIONS: Study 2*

| ITEM | FACTOR 1 PC/LC | FACTOR 2 EC | FACTOR 3 ST-1 | FACTOR 4 ST-2 |
|------|------|------|------|------|
| 1 | **0.854** | -0.005 | -0.029 | 0.097 |
| 2 | **0.865** | 0.179 | -0.045 | 0.006 |
| 3 | 0.072 | 0.034 | **0.709** | 0.458 |
| 4 | **0.793** | 0.233 | -0.102 | -0.096 |
| 5 | 0.108 | **0.868** | 0.008 | 0.021 |
| 6 | **0.834** | -0.071 | -0.000 | 0.212 |
| 7 | 0.114 | 0.032 | 0.108 | **0.942** |
| 8 | 0.023 | **0.888** | 0.058 | -0.001 |
| 9 | **0.632** | -0.415 | 0.037 | 0.129 |
| 10 | **0.814** | 0.163 | -0.116 | 0.006 |
| 11 | -0.206 | -0.002 | **0.901** | -0.065 |
| 12 | 0.094 | **0.849** | -0.041 | 0.033 |
| VE | 33% | 21% | 11% | 10% |

Note:    Items 1, 6, 9 = LOCUS OF CAUSALITY

Items 2, 4, 10 = PERSONAL CONTROL

Items 3, 7, 11 = STABILITY

Items 5, 8, 12 = EXTERNAL CONTROL

VE = Variance explained by factor

# APPENDIX E


# RESULTS OF PRINCIPAL COMPONENTS ANALYSIS

## NEW ATTRIBUTIONAL STYLE TEST: STUDY 2

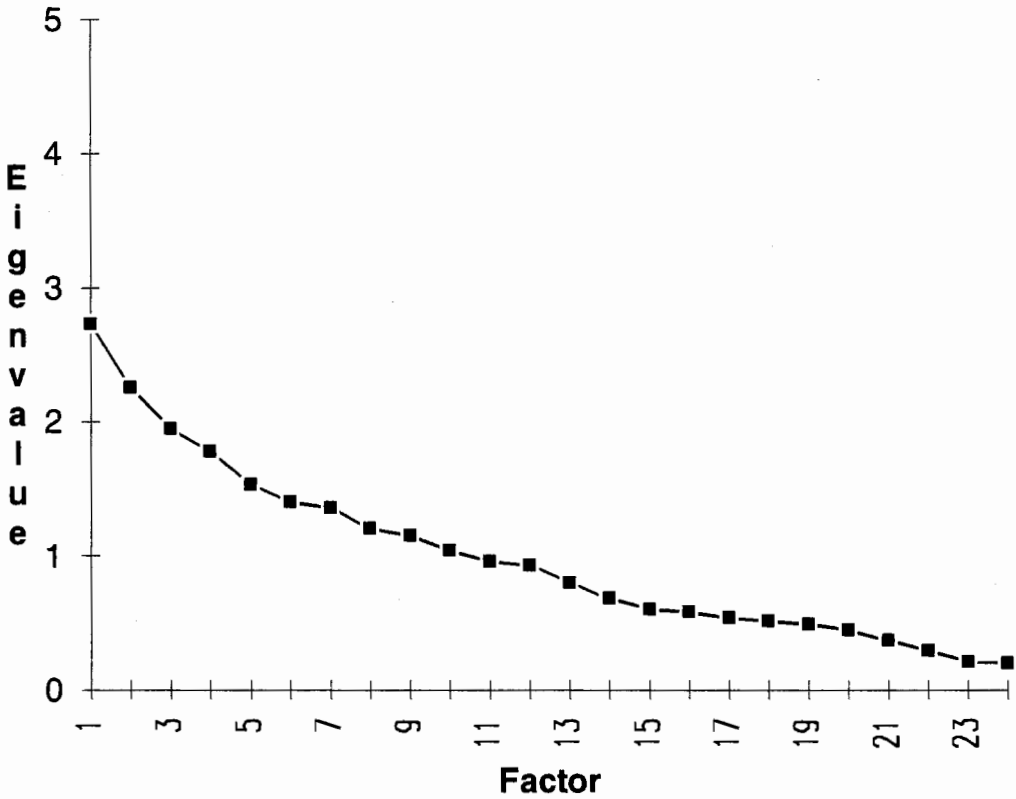Figure E-1. Scree test for factor cutoff: New Test, STUDY 2

Table E-1

*Rotated factor loadings of causal subscales on the new AS test: Study 2*

| SUBSCALE | FACTOR 1<br>BNK | FACTOR 2<br>FRD | FACTOR 3<br>ST-1 | FACTOR 4<br>EC | FACTOR 5<br>LOS |
|---|---|---|---|---|---|
| CAN-LC | 0.131 | 0.074 | 0.037 | 0.208 | 0.130 |
| CAN-PC | 0.078 | 0.021 | 0.010 | -0.047 | 0.043 |
| CAN-EC | 0.031 | -0.116 | 0.153 | 0.107 | 0.096 |
| CAN-ST | 0.022 | -0.052 | 0.177 | 0.099 | 0.102 |
| DIV-LC | 0.075 | 0.009 | 0.135 | -0.043 | 0.052 |
| DIV-PC | 0.130 | 0.058 | -0.312 | 0.161 | 0.005 |
| DIV-EC | 0.126 | 0.022 | -0.193 | 0.348 | 0.167 |
| DIV-ST | -0.066 | -0.082 | **0.743** | 0.019 | -0.087 |
| BNK-LC | **0.903** | 0.032 | 0.077 | -0.044 | 0.023 |
| BNK-PC | **0.858** | 0.113 | -0.121 | 0.040 | -0.045 |
| BNK-EC | **-0.459** | 0.093 | 0.046 | 0.327 | 0.053 |
| BNK-ST | 0.092 | -0.137 | **0.599** | 0.042 | 0.147 |
| FAC-LC | 0.061 | -0.040 | 0.116 | -0.200 | 0.076 |
| FAC-PC | -0.022 | 0.068 | 0.037 | 0.301 | 0.167 |
| FAC-EC | -0.078 | -0.022 | 0.019 | **0.779** | 0.024 |
| FAC-ST | 0.018 | -0.000 | 0.011 | -0.308 | -0.005 |
| FRD-LC | 0.157 | **0.873** | 0.027 | -0.009 | 0.013 |
| FRD-PC | 0.088 | **0.782** | -0.274 | 0.075 | -0.008 |
| FRD-EC | 0.161 | **-0.630** | -0.062 | 0.228 | -0.042 |
| FRD-ST | -0.052 | 0.042 | **0.728** | 0.040 | 0.103 |
| LOS-LC | -0.033 | -0.023 | 0.080 | -0.070 | **0.903** |
| LOS-PC | -0.002 | 0.058 | 0.038 | 0.169 | **0.886** |
| LOS-EC | 0.026 | -0.054 | 0.065 | **0.721** | 0.041 |
| LOS-ST | -0.088 | -0.020 | 0.192 | 0.136 | -0.100 |
| VE | 8% | 7.7% | 7.5% | 7.4% | 7.3% |

Table E-1 Continued

| SUBSCALE | FACTOR 6 CAN: PC/ST | FACTOR 7 CAN: LC/EC | FACTOR 8 FAC | FACTOR 9 DIV | FACTOR 10 ST-2 |
|---|---|---|---|---|---|
| CAN-LC | 0.316 | **-0.633** | 0.083 | -0.026 | 0.203 |
| CAN-PC | **0.841** | -0.133 | -0.016 | 0.051 | 0.054 |
| CAN-EC | 0.087 | **0.782** | 0.026 | 0.024 | -0.108 |
| CAN-ST | **-0.779** | -0.068 | -0.023 | 0.101 | 0.129 |
| DIV-LC | 0.018 | -0.016 | -0.052 | **0.829** | 0.056 |
| DIV-PC | -0.102 | 0.064 | 0.031 | **0.704** | -0.006 |
| DIV-EC | -0.170 | 0.423 | 0.069 | -0.375 | 0.280 |
| DIV-ST | 0.069 | -0.041 | -0.137 | -0.106 | 0.040 |
| BNK-LC | 0.012 | -0.023 | 0.027 | 0.142 | -0.033 |
| BNK-PC | 0.072 | 0.023 | 0.006 | 0.047 | 0.007 |
| BNK-EC | 0.094 | 0.402 | -0.030 | 0.078 | .406 |
| BNK-ST | -0.186 | 0.047 | 0.129 | 0.032 | 0.166 |
| FAC-LC | -0.039 | 0.012 | **0.833** | -0.060 | 0.208 |
| FAC-PC | 0.065 | -0.044 | **0.754** | 0.017 | -0.278 |
| FAC-EC | -0.061 | -0.053 | -0.060 | 0.047 | -0.156 |
| FAC-ST | -0.065 | -0.049 | -0.119 | 0.030 | **0.733** |
| FRD-LC | 0.069 | -0.054 | 0.045 | 0.060 | 0.054 |
| FRD-PC | 0.016 | 0.066 | 0.007 | -0.055 | 0.066 |
| FRD-EC | 0.002 | 0.270 | 0.056 | -0.070 | 0.196 |
| FRD-ST | -0.092 | 0.104 | 0.188 | 0.037 | -0.013 |
| LOS-LC | -0.002 | 0.013 | 0.121 | -0.019 | 0.014 |
| LOS-PC | -0.044 | 0.037 | 0.063 | 0.064 | -0.091 |
| LOS-EC | -0.061 | 0.072 | 0.061 | 0.014 | 0.039 |
| LOS-ST | -0.003 | -0.203 | 0.135 | 0.003 | **0.503** |
| VE | 6.4% | 6.3% | 5.9% | 5.8% | 5.5% |

Note:  CAN = CANCER; DIV = DIVORCE; BNK = BANKRUPTCY
FAC = FACIAL DISFIGUREMENT; FRD = FRIENDLESSNESS
LOS = LOSS OF ALL POSSESSIONS

LC = LOCUS; PC = PERSONAL CONTROL
EC = EXTERNAL CONTROL; ST = STABILITY

VE = Variance explained by factor

# APPENDIX F

# NOMOLOGICAL NETWORK OF CONTROLLABILITY AS FOR OTHERS' MISFORTUNES

Several psychological variables not discussed in the text of this thesis also might be related and unrelated to "controllability attributional style for others' misfortunes". These variables are outlined below.

## Related constructs

*Locus of Control.* Rotter's (1966) Locus of Control scale measures peoples' generalized expectencies for internal vs. external control of reinforcement contingencies. A high scorer on the Rotter scale thinks of him or herself as at the mercy of external forces, thinks the causes of his/her outcomes are located outside him/herself, and cites external reasons when explaining outcomes and events (Rotter, 1966). Conversely, low scorers on the Rotter scale think events are contingent on one's behaviours or one's relatively permanent characteristics, and they cite internal causes when explaining outcomes and events. There is some evidence to suggest that peoples' tendencies to make internal or external attributions about the causes of victims' suffering stems from their self-perceptions about the degree of control one has over one's fate (e.g., DeCharms, 1968; Sosis, 1974). Individuals with an internal locus of control (i.e., who perceive their outcomes to be a function of their own actions), also called "origins" (DeCharms, 1968), view themselves as captains of their fates, and this perception has been shown to extend to the outcomes of others (DeCharms, 1968; Sosis, 1974), as Heider (1958) theorized. For example, Sosis (1974) found that internals (on the Rotter scale) assigned more responsibility to an accident victim than did externals, and argued that this finding might be due to a process of "assimilative projection". (A similar finding was reported by DeCharms, 1968). Conversely, individuals with an

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external locus of control (i.e., who perceive their outcomes to be a function of luck, fate, powerful others, or the complexity of circumstance), also called "pawns" (DeCharms, 1968), reject the notion that people are captains of their fates (DeCharms, 1968; Sosis, 1974).

*Trait Anger and Anger Expressiveness.* Spielberger et al. (1988) developed a State-Trait Anger Expression Inventory (STAXI) that includes scales that measure state anger (S-Anger), trait anger (T-Anger), anger-in (AX/In) or suppressed anger, and anger-out (AX/Out) or anger expressed toward other persons or the environment. (The STAXI yields measures on several other scales as well.) In combination, the tendency to be angry and the tendency to direct that anger outward to others/environment likely influences the causes used to explain others' misfortunes. Thus, an individual high in both T-Anger and AX/Out may also be high in "controllability attributional style for others' misfortunes". High scorers on the STAXI T-Anger scale,

> frequently experience angry feelings and often feel that they are treated unfairly by others. Such persons are also likely to experience a great deal of frustration. Whether they express, suppress, or control their anger can be inferred from their scores on the AX/In, AX/Out, and AX/Con scales. (Spielberger, 1988, p. 5)

High scorers on the STAXI AX/Out scale,

> frequently experience anger which they express in aggressive behavior directed towards other persons or objects in the environment. Anger-out may be expressed in physical acts such as assaulting other persons or slamming doors, or it may be expressed verbally in the form of criticism, sarcasm, insults, threats, and the extreme use of profanity. (Spielberger, 1988, p. 5)

*Desirability of Control.* Desirability of control (Burger & Cooper, 1979) differs from locus of control (Rotter, 1966) in that desirability of control refers to *how attractive* personal control over events is, while locus of control refers to *how much* control a person believes s/he has over events (Burger & Cooper, 1979). Persons high in desirability of control prefer to make their own decisions, take actions to avoid a potential loss of control, and assume leadership roles in group settings (Burger, 1985). High scorers on the Desirability of Control (DC) scale (Burger & Cooper, 1979) are more susceptible to the "illusion of control" (Langer, 1975), and therefore may be more likely to perceive personal control where it does not exist, for example, in the control that others' have over their outcomes.

*Attributional Style for (Own) Negative Events.* On the basis of prior evidence,[1] I am led to a "cognitive consistency" hypothesis regarding the relationship between AS for own misfortunes and AS for others' misfortunes. In an earlier study I conducted, there was a moderate degree of correspondence between subjects' ASQ scores and their causal and responsibility attributions about accident victims. Specifically, subjects who attributed hypothetical negative events on the ASQ to internal, stable causes also showed a slight tendency to attribute another's misfortune to uncontrollable aspects (i.e., character) of hypothetical victims. Thus, knowing something about a person's position on one dimension (AS for [own] negative outcomes) appeared to tell us something about the person's position on another (uncontrollability AS for others misfortunes).

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[1] Manuscript in preparation.

### Unrelated constructs

*Belief in a Just World.* Someone with a strong belief in a just world (BJW) thinks people get what they deserve, and, conversely, that people deserve what they get. A BJW is simplistic with regard to reinforcement contingencies; a person with a strong BJW perceives simple causal relationships between persons and rewards and punishments, denies the operation of chance in explaining own and others' outcomes, and locates causes for outcomes internally (see Lerner & Miller, 1978 for a review). BJW and controllability AS for others' misfortunes seem to be very similar constructs. However, I feel they are also independent. To demonstrate this conceptually, notice that it is possible to argue for either a positive or a negative relationship between the two concepts, as follows: A "cognitive consistency" hypothesis leads me to predict that a person with a controllability AS for others' misfortunes would also feel the world is just (or vice versa). However, a "reactance" hypothesis leads me to predict that a person may have a controllability AS for others' misfortunes because s/he perceives the world to be *unjust*, but s/he wishes it were more just. Thus knowing something about a person's position along one dimension (BJW) might tell us little about the other (controllability AS). Will this prediction be supported by evidence? Perhaps. In the same study I conducted (mentioned earlier), I found no relationship between BJW and the amount of blame that subjects ascribed to accident victims for their negative fates. The correlations between BJW and victim blame measures in that study were all low, between about .05 and .18. (On the other hand, correlations between BJW and questions about whether the victim *deserved* the outcome or not were quite high, on the order of .42 and .38 for a severely negative (victim) outcome.)

*Machiavellianism.* Persons high in Machiavellianism (Mach) are described as interpersonally manipulative, not hostile or vindictive, coolly detached from others, and unconcerned with face-saving (see Mudrack's 1990 meta-analysis and review of 20 studies. According to Mudrack (1990), hi Machs tend to be external on "locus of control" measures. Further, it has been suggested that Mach may represent attempt to assert influence over a hostile environment (Mudrack, 1990). Ickes, Reidhead, and Patterson (1986) suggested that Mach is a self-oriented, assimilative form of impression management compared with self-monitoring, which is an other-oriented, accomodative form of impression management.

*Anxiety.* The State-Trait Anxiety Inventory, or STAI (Spielberger et al., 1983) purportedly measures both state and trait anxiety. According to Spielberger et al. (1983), state anxiety is a temporary emotional condition of the individual, characterized by subjective feelings of tension and apprehension whereas trait anxiety is a more stable tendency to be anxious. That is, the STAI defines high trait anxiety persons as those who are especially sensitive to situations in which their self-esteem may be affected, e.g., evaluative situations, and as those who react to a wide range of such situations as threatening (with elevated state anxiety).

# APPENDIX G

## RESULTS OF PRINCIPAL COMPONENTS ANALYSES
## CAUSAL DIMENSION SUBSCALES: STUDY 3

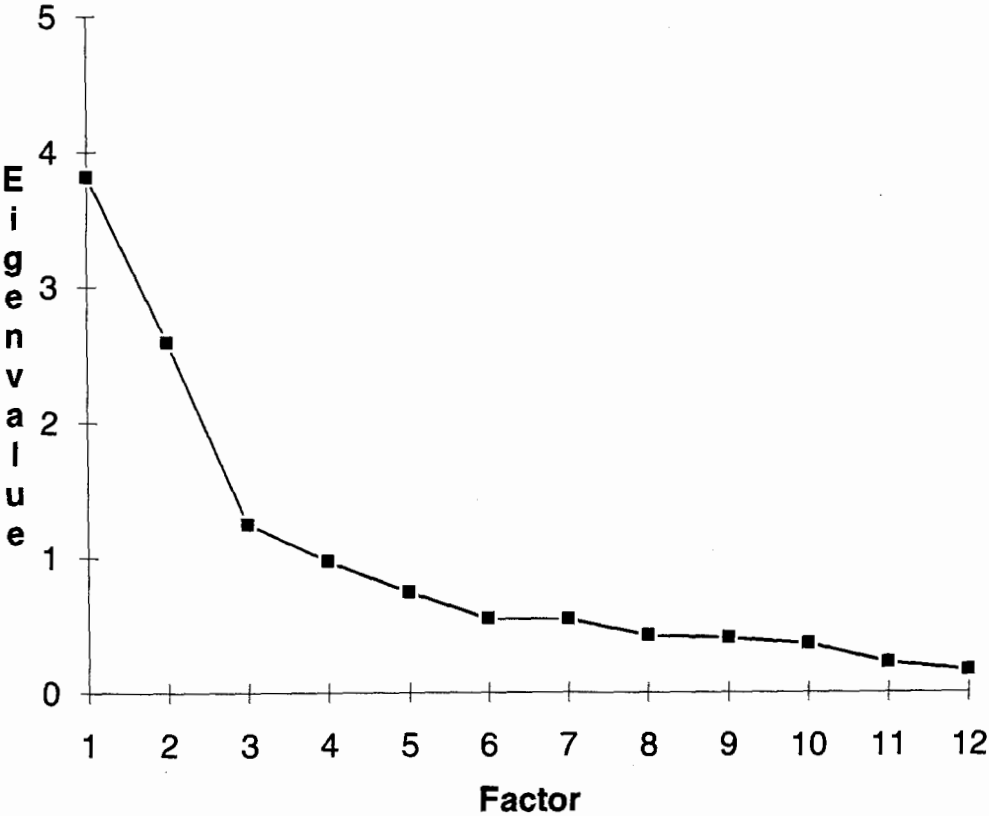Figure G-1. Scree test for factor cutoff: CANCER, STUDY 3

Table G-1

*Rotated factor loadings of rating items measuring the perceived causes of CANCER: Study 3*

| ITEM | FACTOR 1 PC/ST | FACTOR 2 EC | FACTOR 3 LC-1 | FACTOR 4 ST-1 | FACTOR 5 LC-2 |
|------|------|------|------|------|------|
| 1 | 0.535 | -0.097 | **0.577** | -0.005 | 0.094 |
| 2 | **0.907** | 0.031 | 0.183 | 0.041 | -0.065 |
| 3 | **-0.646** | 0.050 | 0.418 | 0.360 | -0.269 |
| 4 | **0.844** | -0.013 | 0.216 | 0.042 | -0.127 |
| 5 | 0.102 | **0.851** | 0.046 | 0.115 | -0.130 |
| 6 | -0.126 | -0.139 | 0.250 | 0.126 | **0.879** |
| 7 | -0.004 | -0.015 | -0.046 | **0.962** | 0.114 |
| 8 | 0.044 | **0.808** | -0.190 | 0.013 | -0.159 |
| 9 | 0.091 | -0.264 | **0.762** | -0.063 | 0.291 |
| 10 | **0.900** | 0.044 | 0.039 | 0.028 | -0.009 |
| 11 | **-0.800** | -0.128 | 0.049 | 0.085 | 0.060 |
| 12 | -0.029 | **0.827** | -0.158 | -0.149 | 0.096 |
| VE | 31% | 18% | 11% | 9% | 8.5% |

Note:    Items 1, 6, 9 = LOCUS OF CAUSALITY

Items 2, 4, 10 = PERSONAL CONTROL

Items 3, 7, 11 = STABILITY

Items 5, 8, 12 = EXTERNAL CONTROL

VE = Variance explained by factor

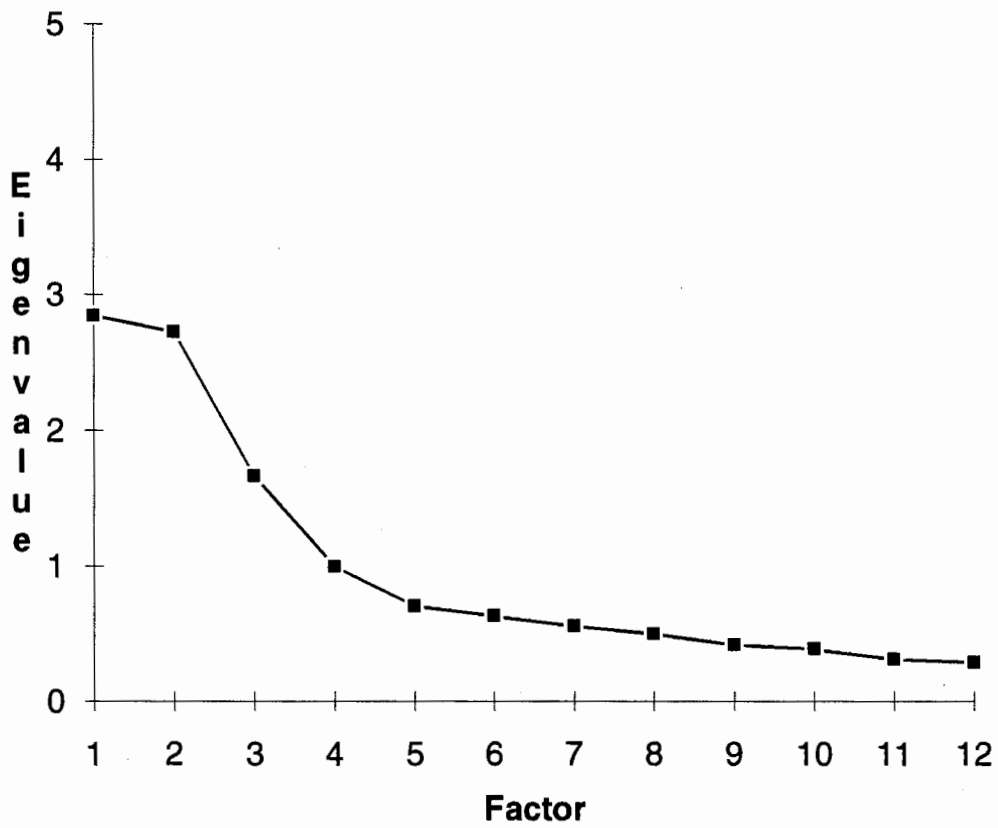Figure G-2. Scree test for factor cutoff: DIVORCE,
STUDY 3

Table G-2

*Rotated factor loadings of rating items measuring the perceived causes of DIVORCE: Study 3*

| ITEM | FACTOR 1 EC | FACTOR 2 PC | FACTOR 3 ST | FACTOR 4 LC |
|------|------|------|------|------|
| 1 | 0.117 | 0.267 | 0.160 | **0.747** |
| 2 | 0.069 | **0.843** | -0.189 | 0.077 |
| 3 | -0.039 | -0.205 | **0.763** | 0.041 |
| 4 | 0.054 | **0.844** | -0.157 | 0.028 |
| 5 | **0.848** | 0.042 | -0.075 | -0.080 |
| 6 | -0.222 | -0.170 | -0.061 | **0.814** |
| 7 | 0.093 | 0.024 | **0.807** | 0.078 |
| 8 | **0.865** | -0.027 | -0.021 | -0.127 |
| 9 | -0.421 | 0.188 | 0.121 | **0.577** |
| 10 | -0.128 | **0.793** | -0.080 | 0.088 |
| 11 | -0.073 | -0.391 | **0.661** | 0.040 |
| 12 | **0.823** | 0.017 | 0.119 | -0.050 |
| VE | 20% | 19.8% | 15% | 13% |

Note:    Items 1, 6, 9 = LOCUS OF CAUSALITY

Items 2, 4, 10 = PERSONAL CONTROL

Items 3, 7, 11 = STABILITY

Items 5, 8, 12 = EXTERNAL CONTROL

VE = Variance explained by factor

Figure G-3. Scree test for factor cutoff:
BANKRUPTCY, STUDY 3
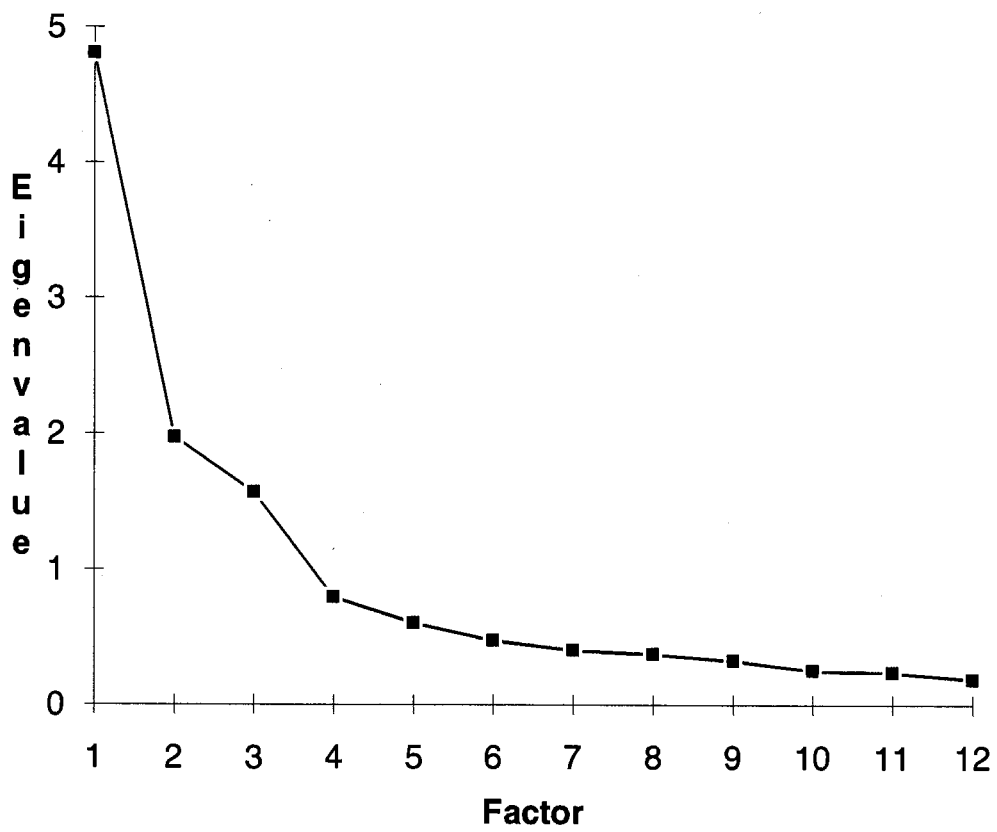
Table G-3
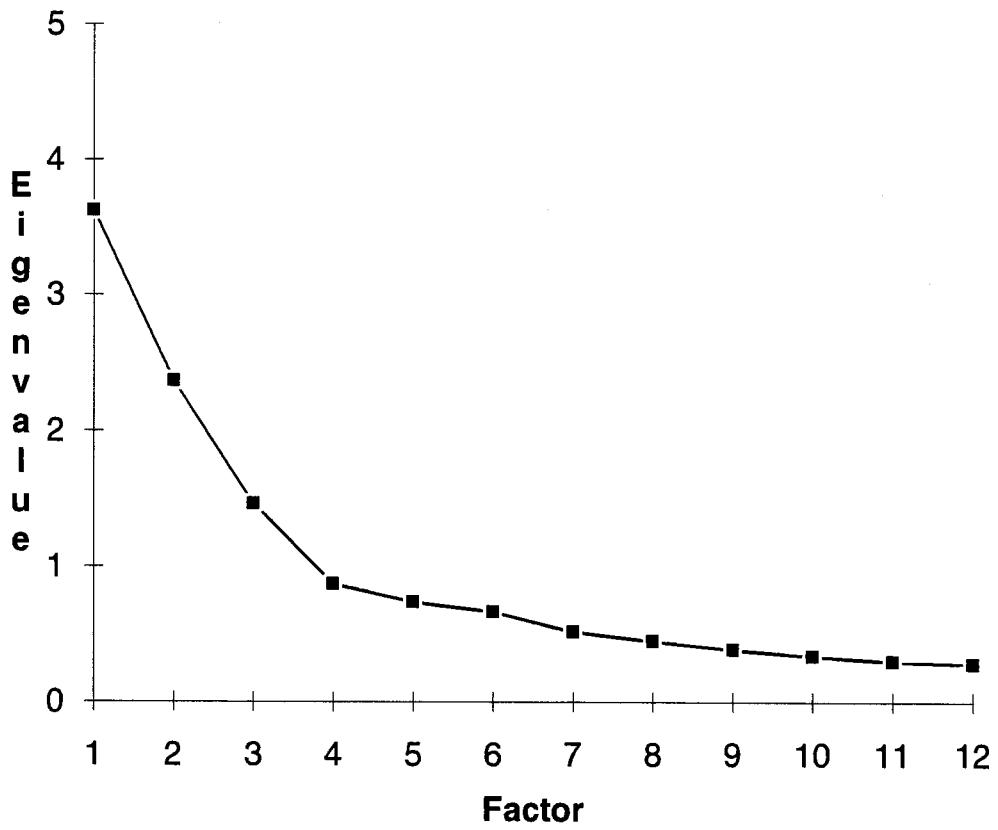
*Rotated factor loadings of rating items measuring the perceived causes of BANKRUPTCY: Study 3*

| ITEM | FACTOR 1 PC/LC | FACTOR 2 EC | FACTOR 3 ST |
|------|------|------|------|
| 1 | **0.741** | -0.275 | 0.039 |
| 2 | **0.846** | 0.001 | -0.150 |
| 3 | -0.090 | -0.082 | **0.811** |
| 4 | **0.848** | -0.006 | -0.187 |
| 5 | -0.152 | **0.860** | 0.034 |
| 6 | **0.663** | -0.361 | 0.174 |
| 7 | 0.200 | 0.123 | **0.752** |
| 8 | -0.267 | **0.842** | 0.065 |
| 9 | **0.760** | -0.362 | 0.083 |
| 10 | **0.847** | -0.175 | -0.113 |
| 11 | -0.396 | -0.012 | **0.642** |
| 12 | -0.108 | **0.851** | -0.044 |
| VE | 34% | 21% | 14% |

Note:     Items 1, 6, 9 = LOCUS OF CAUSALITY

Items 2, 4, 10 = PERSONAL CONTROL

Items 3, 7, 11 = STABILITY

Items 5, 8, 12 = EXTERNAL CONTROL

VE = Variance explained by factor

Figure G-4. Scree test for factor cutoff: FACIAL
DISFIGUREMENT, STUDY 3
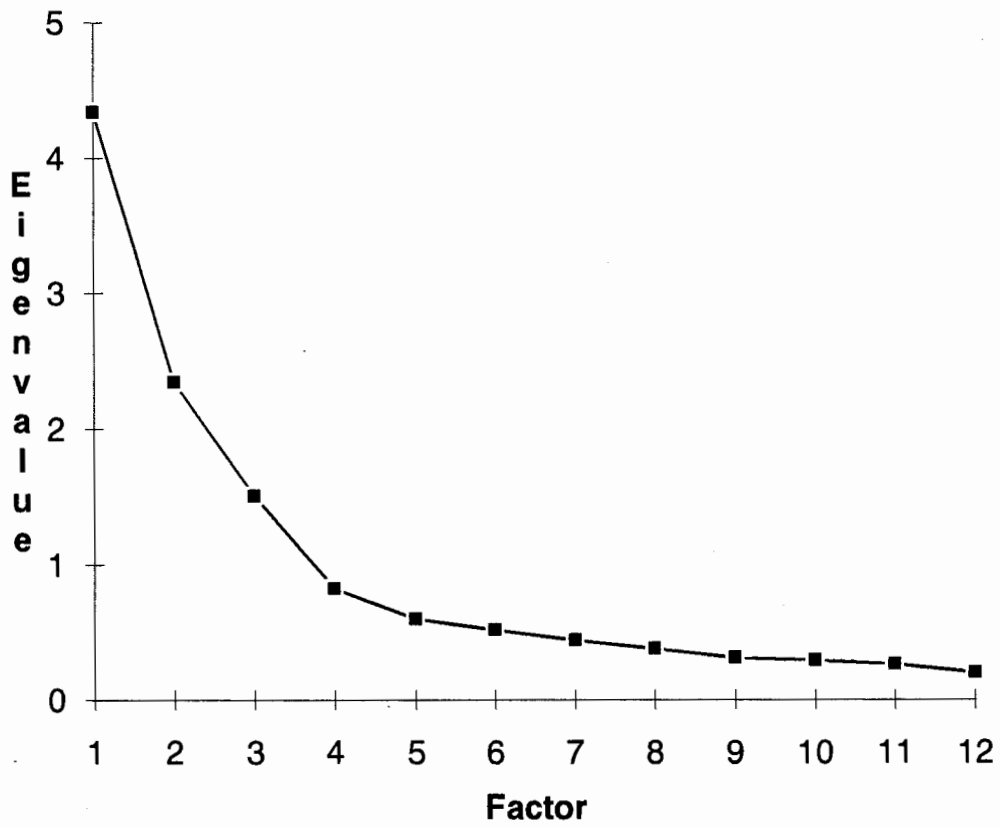
Table G-4

*Rotated factor loadings of rating items measuring the perceived causes of FACIAL DISFIGUREMENT: Study 3*

| ITEM | FACTOR 1 PC/LC | FACTOR 2 EC | FACTOR 3 ST |
|------|---------|---------|---------|
| 1 | **0.804** | -0.016 | -0.076 |
| 2 | **0.750** | 0.135 | -0.253 |
| 3 | -0.182 | -0.016 | **0.803** |
| 4 | **0.743** | 0.109 | -0.277 |
| 5 | 0.046 | **0.871** | -0.042 |
| 6 | **0.714** | -0.049 | 0.121 |
| 7 | -0.035 | -0.055 | **0.759** |
| 8 | 0.029 | **0.872** | -0.101 |
| 9 | 0.491 | -0.270 | 0.439 |
| 10 | **0.746** | 0.165 | -0.235 |
| 11 | -0.185 | -0.150 | **0.576** |
| 12 | 0.073 | **0.796** | -0.128 |
| VE | 26% | 19% | 17% |

Note:    Items 1, 6, 9 = LOCUS OF CAUSALITY

Items 2, 4, 10 = PERSONAL CONTROL

Items 3, 7, 11 = STABILITY

Items 5, 8, 12 = EXTERNAL CONTROL

VE = Variance explained by factor

Figure G-5. Scree test for factor cutoff:
FRIENDLESSNESS, STUDY 3

Table G-5

*Rotated factor loadings of rating items measuring the perceived causes of*

*FRIENDLESSNESS: Study 3*

| ITEM | FACTOR 1 PC | FACTOR 2 EC | FACTOR 3 LC | FACTOR 4 ST |
|------|-------------|-------------|-------------|-------------|
| 1 | 0.294 | -0.227 | **0.765** | 0.043 |
| 2 | **0.868** | -0.065 | 0.253 | -0.156 |
| 3 | -0.187 | 0.057 | 0.127 | **0.799** |
| 4 | **0.849** | -0.019 | 0.202 | -0.192 |
| 5 | -0.168 | **0.847** | -0.178 | 0.023 |
| 6 | 0.171 | -0.173 | **0.875** | -0.011 |
| 7 | -0.038 | 0.050 | 0.055 | **0.813** |
| 8 | -0.107 | **0.840** | -0.254 | -0.025 |
| 9 | 0.204 | -0.237 | **0.811** | 0.062 |
| 10 | **0.776** | -0.210 | 0.198 | -0.198 |
| 11 | -0.262 | -0.074 | -0.122 | **0.745** |
| 12 | 0.011 | **0.857** | -0.146 | 0.048 |
| VE | 20% | 19.6% | 19% | 16% |

Note:  Items 1, 6, 9 = LOCUS OF CAUSALITY

Items 2, 4, 10 = PERSONAL CONTROL

Items 3, 7, 11 = STABILITY

Items 5, 8, 12 = EXTERNAL CONTROL

VE = Variance explained by factor

Figure G-6. Scree test for factor cutoff: LOSS OF ALL POSSESSIONS, STUDY 3
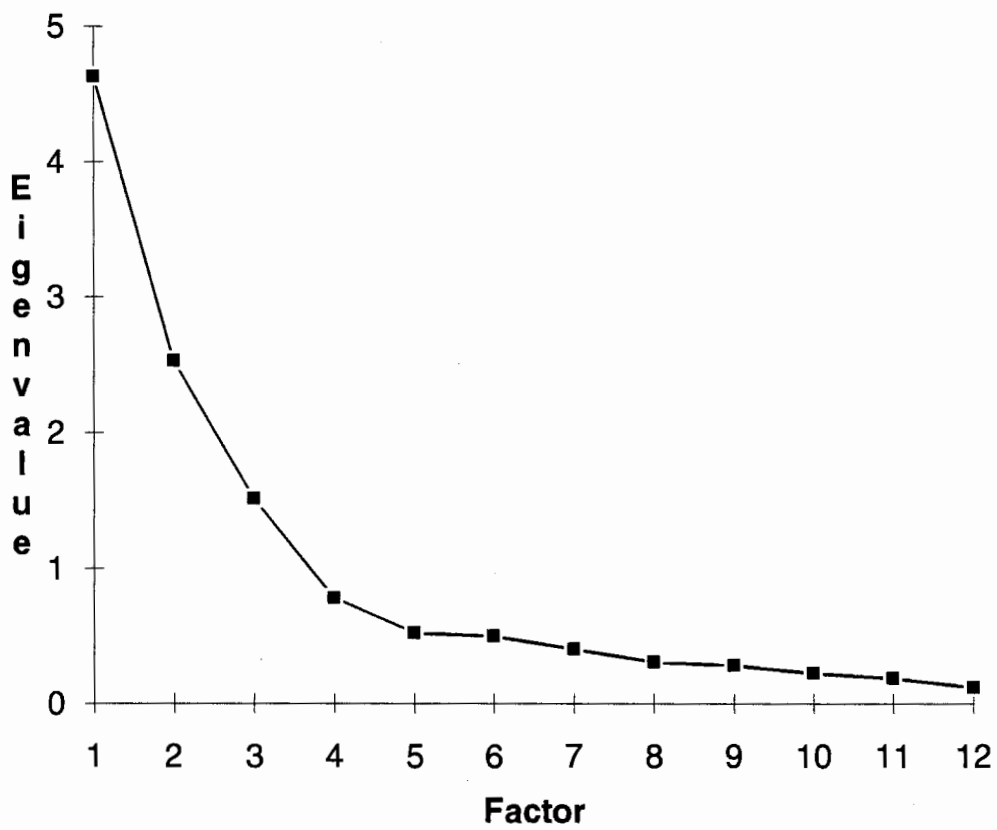
Table G-6

*Rotated factor loadings of rating items measuring the perceived causes of LOSS OF ALL*

*POSSESSIONS: Study 3*

| ITEM | FACTOR 1 LC/PC | FACTOR 2 EC | FACTOR 3 ST-1 | FACTOR 4 ST-2 |
|------|--------|--------|--------|--------|
| 1 | **0.906** | -0.082 | -0.032 | 0.094 |
| 2 | **0.865** | 0.022 | -0.145 | 0.046 |
| 3 | 0.010 | -0.005 | **0.819** | 0.297 |
| 4 | **0.846** | 0.070 | -0.199 | 0.077 |
| 5 | -0.039 | **0.913** | 0.001 | -0.003 |
| 6 | **0.903** | -0.081 | -0.003 | 0.015 |
| 7 | 0.126 | 0.020 | 0.136 | **0.963** |
| 8 | -0.107 | **0.896** | -0.023 | 0.039 |
| 9 | **0.714** | -0.363 | 0.098 | 0.080 |
| 10 | **0.846** | 0.092 | -0.162 | 0.002 |
| 11 | -0.291 | -0.096 | **0.817** | -0.106 |
| 12 | 0.038 | **0.829** | -0.081 | -0.007 |
| VE | 37% | 21% | 12% | 9% |

Note:  Items 1, 6, 9 = LOCUS OF CAUSALITY

Items 2, 4, 10 = PERSONAL CONTROL

Items 3, 7, 11 = STABILITY

Items 5, 8, 12 = EXTERNAL CONTROL

VE = Variance explained by factor

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# APPENDIX H

## RESULTS OF PRINCIPAL COMPONENTS ANALYSIS

## NEW ATTRIBUTIONAL STYLE TEST: STUDY 3

Figure H-1. Scree test for factor cutoff: New Test, STUDY 3
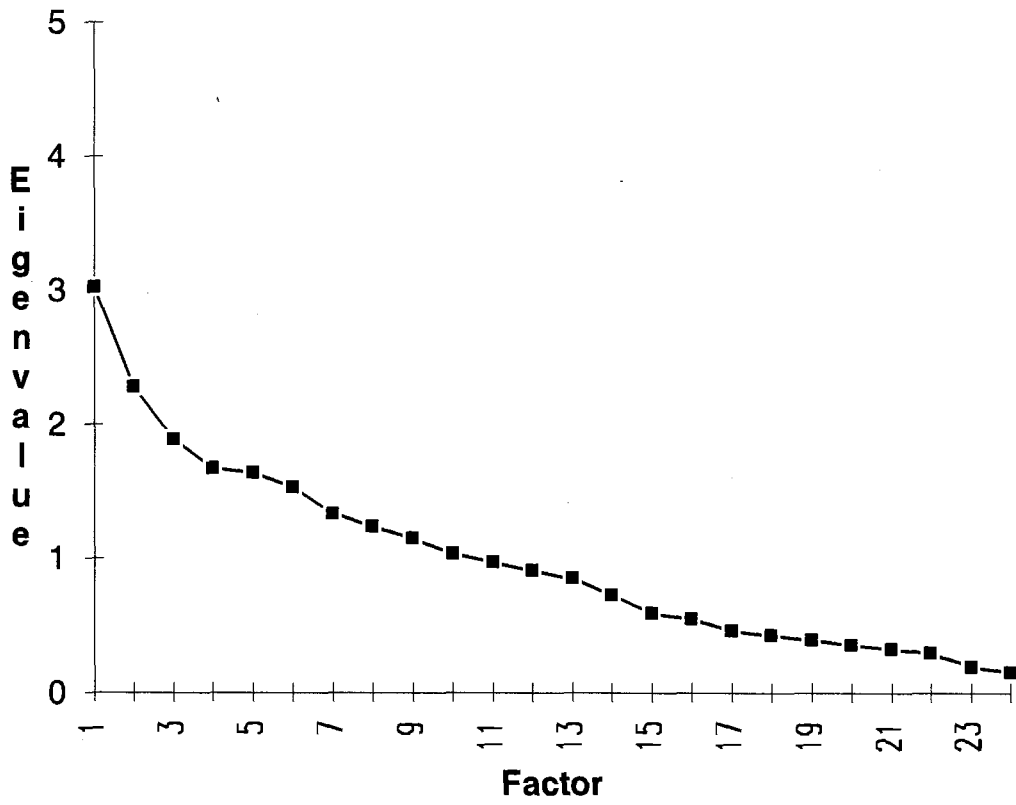
Table H-1

*Rotated factor loadings of causal subscales on the new AS test: Study 3*

| SUBSCALE | FACTOR 1 LOS-1 | FACTOR 2 BNK | FACTOR 3 FRD-1 | FACTOR 4 CAN-1 | FACTOR 5 FAC-1 |
|---|---|---|---|---|---|
| CAN-LC | -0.124 | 0.090 | 0.201 | 0.328 | 0.015 |
| CAN-PC | 0.047 | 0.062 | -0.017 | **0.865** | 0.047 |
| CAN-EC | 0.220 | 0.010 | 0.044 | 0.066 | 0.143 |
| CAN-ST | -0.029 | 0.128 | 0.095 | **-0.802** | 0.053 |
| | | | | | |
| DIV-LC | -0.145 | 0.078 | 0.024 | 0.194 | -0.130 |
| DIV-PC | -0.476 | 0.020 | 0.071 | 0.202 | -0.280 |
| DIV-EC | 0.018 | -0.041 | -0.210 | -0.023 | 0.163 |
| DIV-ST | 0.417 | 0.016 | -0.018 | -0.262 | 0.306 |
| | | | | | |
| BNK-LC | 0.038 | **0.902** | 0.102 | -0.055 | -0.026 |
| BNK-PC | -0.084 | **0.817** | 0.181 | -0.013 | -0.044 |
| BNK-EC | -0.069 | **-0.656** | 0.113 | -0.044 | -0.022 |
| BNK-ST | 0.073 | -0.153 | 0.086 | -0.097 | 0.423 |
| | | | | | |
| FAC-LC | -0.028 | -0.020 | 0.010 | 0.086 | **0.832** |
| FAC-PC | 0.174 | -0.002 | -0.057 | -0.095 | **0.742** |
| FAC-EC | 0.041 | -0.047 | -0.077 | 0.084 | -0.074 |
| FAC-ST | 0.023 | 0.031 | -0.017 | 0.061 | -0.187 |
| | | | | | |
| FRD-LC | 0.004 | 0.113 | **0.857** | -0.079 | -0.005 |
| FRD-PC | -0.158 | 0.069 | **0.718** | 0.041 | 0.099 |
| FRD-EC | -0.116 | -0.031 | **-0.684** | 0.060 | 0.114 |
| FRD-ST | 0.222 | -0.110 | -0.109 | -0.209 | -0.030 |
| | | | | | |
| LOS-LC | **0.832** | -0.007 | -0.008 | 0.077 | -0.002 |
| LOS-PC | **0.861** | 0.025 | 0.004 | 0.088 | 0.031 |
| LOS-EC | -0.113 | -0.019 | -0.083 | 0.034 | 0.041 |
| LOS-ST | -0.302 | 0.071 | -0.094 | 0.105 | 0.171 |
| | | | | | |
| VE | 9% | 8.3% | 8% | 7.4% | 7.3% |

Table H-1 Continued

| SUBSCALE | FACTOR 6 FRD-2 | FACTOR 7 FAC-2 | FACTOR 8 CAN-2 | FACTOR 9 DIV | FACTOR 10 LOS-2 |
|---|---|---|---|---|---|
| CAN-LC | 0.350 | -0.076 | **-0.617** | 0.161 | 0.040 |
| CAN-PC | 0.021 | -0.042 | -0.110 | 0.053 | 0.093 |
| CAN-EC | 0.081 | -0.093 | **0.762** | 0.148 | -0.015 |
| CAN-ST | 0.226 | -0.013 | -0.074 | -0.043 | 0.095 |
| DIV-LC | -0.104 | 0.057 | 0.098 | **0.774** | -0.067 |
| DIV-PC | 0.247 | 0.150 | 0.296 | -0.119 | 0.068 |
| DIV-EC | 0.433 | -0.083 | 0.377 | -0.294 | 0.040 |
| DIV-ST | 0.059 | 0.076 | -0.205 | **0.558** | 0.053 |
| BNK-LC | 0.065 | 0.039 | -0.058 | 0.048 | -0.024 |
| BNK-PC | -0.121 | -0.095 | 0.114 | 0.213 | 0.120 |
| BNK-EC | 0.194 | -0.245 | 0.147 | 0.290 | 0.256 |
| BNK-ST | 0.488 | 0.330 | -0.108 | -0.087 | 0.136 |
| FAC-LC | 0.049 | 0.079 | 0.112 | 0.005 | -0.024 |
| FAC-PC | 0.038 | -0.406 | 0.086 | -0.063 | 0.022 |
| FAC-EC | 0.123 | **-0.683** | 0.099 | 0.011 | -0.023 |
| FAC-ST | 0.134 | **0.759** | 0.083 | 0.105 | -0.079 |
| FRD-LC | 0.144 | 0.055 | 0.056 | 0.021 | -0.032 |
| FRD-PC | -0.276 | 0.142 | 0.044 | 0.151 | 0.156 |
| FRD-EC | 0.123 | 0.099 | 0.259 | 0.129 | 0.208 |
| FRD-ST | **0.704** | -0.082 | -0.015 | -0.036 | 0.084 |
| LOS-LC | 0.135 | 0.067 | 0.179 | -0.027 | -0.186 |
| LOS-PC | 0.114 | -0.053 | 0.203 | -0.091 | 0.101 |
| LOS-EC | 0.124 | -0.000 | -0.024 | -0.003 | **0.858** |
| LOS-ST | 0.431 | 0.171 | -0.023 | 0.246 | **-0.451** |
| VE | 6.7% | 6.3% | 6.2% | 5.5% | 4.9% |

Note: CAN = CANCER; DIV = DIVORCE; BNK = BANKRUPTCY
FAC = FACIAL DISFIGUREMENT; FRD = FRIENDLESSNESS
LOS = LOSS OF ALL POSSESSIONS

LC = LOCUS; PC = PERSONAL CONTROL
EC = EXTERNAL CONTROL; ST = STABILITY

VE = Variance explained by factor

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# REFERENCE NOTES

*Chapter 1*

1. Although social psychology and behaviourism both focus on the situational determinants of behaviour, the two disciplines diverged many years ago over just this issue (i.e., construal). According to Ross & Nisbett (1991),

> ...situationism in social psychology has similarities to the situationism of the behaviorist tradition. Both traditions were impatient with the lay (and psychoanalytic) emphasis on the importance of individual differences and unique personal histories, and both emphasized the importance of the immediately impinging stimulus situation. But the social psychological and behaviorist traditions parted company long ago over the issue of construal. Social psychology [emphasizes that] it is the situation as construed by the subject that is the true stimulus. This meant that [social psychological] theory was always going to have to focus on subjective interpretations of stimuli and responses as much as on stimulus-response relationships themselves (p. 11).

2. Although this body of research focuses on the role that attributions play in helping behaviour, there should be no implication taken that other factors affecting helping behaviour are unimportant.

3. Many philosophers have been fascinated by the concept of personal control since this concept is so closely tied to the notion of "free will". For example, Dennett (1984) argued that the concept of personal control means the following: When you control your behaviour, you do not do it by controlling all the causes that influence it. Rather, behaviour is overdetermined, and many causes may be beyond your control, but so long as you know the effects of those causes and can predict them, then you can plan or adjust your control in light of those circumstances. In other words, the fact that your behaviour is under the influence of causes outside your control does not prevent you from controlling it (Dennett, 1984). The concept of uncontrollability has also received attention from philosophers. For example, Nozick (1981) distinguished between the conceptualization of the person as "hand puppet" (i.e., subject to internal causes outside of his/her control) and that of the person as "marionette" (i.e., subject to external causes outside of his/her control). Also, Dennett (1984) argued that uncontrollable bad events are due either to "no warning" or to "no way to avoid". That is, "we are at the mercy of those causal chains that either creep up

on us without warning ("blind-siding" us) or that leave us no paths by which we can avoid their unwanted effects" (p. 55).

4. Compared to the modest cross-situational consistencies observed in behaviour, Mischel & Peake (1982) noted that behaviour exhibits considerable temporal stability when measured reliably (i.e., when repeated observations are summed to reduce the error of measurement).

*Chapter 2*

1. After listing the events, subjects answered two perceived likelihood questions about each of the negative events they generated. However, the self/other target issue and the perceived likelihood data were central to another study and will not be discussed further in the present thesis.

2. When considering the new controllability attributional style construct it may be useful to keep in mind that there are other possible attributional styles for others' misfortunes. Three other attributional styles for others' misfortunes are particularly salient. First, an internal-uncontrollability attributional style, which may be defined as a tendency to make internal, uncontrollable attributions about the causes of others' misfortunes (e.g., attributing a person's blindness to an inherited susceptibility to cancer of the retina). Second, an external-controllability attributional style, defined as a tendency to make external, controllable (by someone) attributions about the causes of others' misfortunes (e.g., attributing a person's obesity to his/her parent's excessive overfeeding of the person in childhood or the parent's poor nutritional role-modelling). Third, an external-uncontrollability attributional style, defined as a tendency to make external, uncontrollable (by anyone) attributions about the causes of others' misfortunes (e.g., attributing a person's obesity to undetected exposure to a natural toxin that has significantly damaged his/her thyroid). The behaviours that relate to these alternative AS constructs reflect specific aspects of what controllability AS is **not**. Clearly, the behaviours outlined by the alternative style-constructs, as with controllability AS, can be situationally-induced. Thus, the alternative attributional style constructs, like controllability AS, are each defined as a tendency to respond in the same general way toward a certain class of stimuli (others' misfortunes) rather than as a set of acts. As with controllability AS, the premise of these alternative constructs is that some persons need little situational pressure to do "X" while others need significantly more. Any of the behaviours outlined by these alternative style-constructs could be engaged in by a controllability AS individual. But they are unlikely to

be (and other causal inferences are likely to be made) by controllability AS individuals when situational inducements are weak. A similar argument could be made for each of the alternative attributional styles. Finally, like controllability AS, each of the alternative style-constructs is conceived of as a set of causal inferences that covary, and the operational definition of each style would be a score on a particular scale.

*Chapter 3*

1. It should be noted that I am referring to Mitchell's (1989) reported correlations between personality traits and ASQ causal dimensions scale scores (locus, stability, globality) for negative events.

2. Nezu et al. (1986) used a canonical analysis to test the relation between two variable sets - one composed of AS variables and one composed of psychological distress variables. According to the authors,

> only the first canonical correlation was significant, $r = .71$, $X^2$ = 94.26, $p < .001$. This overall correlation accounted for 50% of the explained variance regarding the relationship between the two variable sets. (p. 185)

3. The minimum possible CASOM score was thus 36 and the maximum possible score was 324. In the present study, CASOM scores ranged between 140 and 288, with a mean of 203.59 ($SD = 25.25$).

# LIST OF REFERENCES

Abramson, L.Y., Seligman, M.E.P., & Teasdale, J.D. (1978). Learned helplessness in humans: Critique and reformulation. *Journal of Abnormal and Social Psychology, 87*, 49-74.

Alloy, L.B., Abramson, L.Y., Metalsky, G.I., & Hartlage, S. (1988). The hopelessness theory of depression: Attributional aspects. *British Journal of Clinical Psychology, 27*, 5-21.

Allport, G.W. (1937). *Personality: A psychological interpretation*. New York: Holt.

Allport, G.W. (1955). *Theories of perception and the concept of structure*. New York: Wiley.

Allport, G.W. (1966). Traits revisited. *American Psychologist, 21*, 1-10.

Allport, G.W. (1968). The historical background of modern social psychology. In G. Lindzey & E. Aronson (Eds.), *Handbook of social psychology* (2nd ed., Vol. 1, pp. 1-80). Reading, MA: Addison-Wesley.

Altemeyer, B. (1981). *Right-wing authoritarianism*. Winnipeg: University of Manitoba Press.

Altemeyer, B. (1988). *Enemies of freedom*. San Francisco: Jossey-Bass.

Anastasi, A. (1988). *Psychological testing*. New York: Macmillan.

Anderson, C.A. (1983a). Motivational and performance deficits in interpersonal settings: The effects of attributional style. *Journal of Personality and Social Psychology, 45*, 1136-1147.

Anderson, C.A. (1983b). The causal structure of situations: The generation of plausible causal attributions as a function of type of event situation. *Journal of Experimental Social Psychology, 19*, 93-108.

Anderson, C.A. (1985). Actor and observer attributions for different types of situations: Causal structure effects, individual differences, and the dimensionality of causes. *Social Cognition, 3*, 323-340.

Anderson, C.A. (1990). Personal communication.

Anderson, C.A. (1991). How people think about causes: Examination of the typical phenomenal organization of attributions for success and failure. *Social Cognition,* in press.

Anderson, C.A., & Arnoult, L.H. (1985a). Attributional models of depression, loneliness, and shyness. In J.H. Harvey and G. Weary (Eds.), *Attribution: Basic issues and applications*. New York: Academic Press.

Anderson, C.A., & Arnoult, L.H. (1985b). Attributional style and everyday problems in living: Depression, loneliness, and shyness. *Social Cognition, 3*, 16-35.

Anderson, C.A., & Deuser, W.E. (1991). Science and the reformulated learned helplessness model of depression. *Psychological Inquiry,*

Anderson, C.A., & Harvey, R.J. (1988). Discriminating between problems in living: An examination of measures of depression, loneliness, shyness, and social anxiety. *Journal of Social and Clinical Psychology, 6*, 482-491.

Anderson, C.A., Horowitz, L.M., & French, R. (1983). Attributional style of lonely and depressed people. *Journal of Personality and Social Psychology, 45*, 127-136.

Anderson, C.A., Jennings, D.L., & Arnoult, L.H. (1988). Validity and utility of the attributional style construct at a moderate level of specificity. *Journal of Personality and Social Psychology, 55*, 979-990.

Anderson, C.A., Jennings, D.L., & Arnoult, L.H. (1988). Validity and utility of the attributional style construct at a moderate level of specificity. *Journal of Personality and Social Psychology, 55*, 979-990.

Anderson, C.A., Lepper, M.R., & Ross, L. (1980). Theory perseverence: The persistent influence of discredited information. *Journal of Experimental Psychology, 39*, 1037-1049.

Anderson, C.A., & Riger, A.L. (1991). A controllability attributional model of problems in living: Dimensional and situational interactions in the prediction of depression and loneliness. *Social Cognition, 9*, 149-181.

Anderson, C.A., & Weiner, B. (1990). Attribution and attributional processes in personality. In G. Caprara & G. Heck (Eds., *Modern personality psychology: Critical reviews and new directions*.

Anderson, N.H. (1965). Averaging versus adding as a stimulus combination rule in impression formation. *Journal of Experimental Psychology, 70*, 394-400.

Arntz, A., Gerlsma, C., & Albersnagel, F.A. (1985). Attributional style questioned: psychometric evaluation of the ASQ in Dutch adolescents. *Advances in Behaviour Research and Therapy, 7*, 55-89.

Asch, S.E., (1946). Forming impressions of personality. *Journal of Personality and Social Psychology, 41*, 258-290.

Bandura, A. (1977a). Self-efficacy mechanism in human agency. *American Psychologist, 37,* 122-147.

Bandura, A. (1977b). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 84,* 191-215.

Barnes, R.D., Ickes, .J., & Kidd, R. (1979). Effects of perceived intentionality and stability of another's dependency on helping behavior. *Personality and Social Psychology Bulletin, 5,* 367-372.

Beck, A.T., & Beck, R.W. (1972). Screening depressed patients in family practice: A rapid technique. *Postgraduate Medicine, 52,* 81-85.

Bem, D.J., & Allen, A. (1974). On predicting some of the people some of the time: The search for cross-situational consistencies in behavior. *Psychological Review, 81,* 506-520.

Bentler, P.M., & Bonnett, D.G. (1980). Significance tests and goodness of fit in the analysis of covariance structures. *Psychological Bulletin, 88,* 588-606.

Berkowitz, L. (1969). Resistance to improper dependency relationships. *Journal of Experimental Social Psychology, 5,* 283-294.

Bollen, K.A. (1989). *Structural equations with latent variables.* New York: Wiley.

Bruner, J.S. (1957). Going beyond the information given. In H. Gruber, G. Terrell, & M. Wertheimer (Eds.), *Contemporary approaches to cognition.* Cambridge, MA: Harvard University Press.

Bruner, J.S., & Taguiri, R. (1954). The perception of people. In G. Lindzey (Ed.), *Handbook of social psychology* (Vol. 2). Reading, MA: Addison-Wesley.

Brunswik, E. (1956). *Perception and the representative design of psychological experiments.* (2nd ed.). Berkeley: University of California Press.

Burger, J.M. (1985). Desire for control and achievement-related behaviors. *Journal of Personality and Social Psychology, .*

Burger, J.M., & Cooper, H.M. (1979). The desirability of control. *Motivation and Emotion, 3,* 381-393.

Cantor, N., & Mischel, W. (1979). Prototypes in person perception. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 12). New York: Academic.

Cattell, R.B. (1966). The scree test for the number of factors. *Multivariate Behavioral Research, 1,* 245-276.

Collins, B.E. (1974). Four separate components of the Rotter I-E scale: Belief in a difficult world, a just world, a predictable world and a politically responsive world. *Journal of Personality and Social Psychology, 29,* 381-391.

Comrey, A.L. (1970). *Comrey Personality Scales.* San Diego, CA: EdiTS.

Crandall, V.C., Katovsky, W., & Crandall, V.J. (1965). Children's beliefs in their own control of reinforcement in intellectual-academic situations. *Child Development, 36,* 91-109.

Cronbach, L.J., & Meehl, P.E. (1955). Construct validity in psychological tests. *Psychological Bulletin, 52,* 281-302.

Cutrona, C.E., Russell, D., & Jones, R.D. (1984). Cross-situational consistency in causal attributions: Does attributional style exist? *Journal of Personality and Social Psychology, 47,* 1043-1058.

Darley, J.M., & Batson, C.D. (1973). From Jerusalem to Jericho: A study of situational and dispositional variables in helping behavior. *Journal of Personality and Social Psychology, 27,* 100-119.

Darley, J.M., & Latané, B. (1968). Bystander intervention in emergencies: Diffusion of responsibility. *Journal of Personality and Social Psychology, 8,* 377-383.

DeCharms, R. (1968). *Personal causation.* New York: Academic.

Deaux, K. (1976a). *The behaviour of women and men.* Monterey, CA: Brooks/Cole.

Deaux, K. (1976a). Sex: A perspective on the attribution process. In J.H. Harvey, W.J. Ickes, & R.F. Kidd (Eds.), *New directions in attribution research* (Vol. 1). Hillsdale, NJ: Erlbaum.

Dennett, D.C. (1984). *Elbow room: The varieties of free will worth wanting.* Cambridge, MA: The MIT Press.

Eisen, S.V., & McArthur, L.Z. (1979). Evaluating and sentencing a defendant as a function of his salience and the observer's set. *Personality and Social Psychology Bulletin, 5,* 48-52.

Feather, N.T., & Simon, J.G. (1971). Causal attributions for success and failure in relation to expectations of success based upon selective or manipulative control. *Journal of Personality, 39,* 527-541.

Fincham, F.D., & Jaspers, J.M. (1980). Attribution of responsibility: From man the scientist to man the lawyer. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 13, pp. 81-138). New York: Academic.

Fiske, S.T. (1980). Attention and weight in person perception: The impact of negative and extreme behavior. *Journal of Personality & Social Psychology, 38,* 889-906.

Fiske, S.T., & Taylor, S.E. (1984). *Social cognition.* Reading, MA: Addison-Wesley.

Försterling, F., & Rudolph, U. (1988). Situations, attributions, and the evaluation of reactions. *Journal of Personality and Social Psychology, 54,* 225-232.

Gotlib, I.H. (1984). Depression and general psychopathology in university students. *Journal of Abnormal Psychology, 93,* 19-30.

Hamilton, D.L., & Zanna, M.P. (1974). Context effects in impression formation: Changes in connotative meaning. *Journal of Personality and Social Psychology, 29,* 649-654.

Hartshorne, H., & May, M.A. (1928). *Studies in the nature of character, I: Studies in deceit.* New York: Macmillan.

Hastie, R. (1984). Causes and effects of causal attribution. *Journal of Personality and Social Psychology, 46,* 44-56.

Heider, F. (1944). Social perception and phenomenal causality. *Psychological Review, 51,* 358-374.

Heider, F. (1958). *The psychology of interpersonal relations.* New York: Wiley.

Ickes, W., Reidhead, S., & Patterson, M. (1986). Machiavellianism and self-monitoring: As different as "me" and "you". *Social Cognition, 4,* 58-74.

Jackson, D.N. (1974). *Personality Research Form manual.* Port Huron, MI: Research Psychologists Press.

Jackson, D.N. (1989). *Personality Research Form manual.* Port Huron, MI: Research Psychologists Press.

Jackson, D.N., & Paunonen, S.V. (1980). Personality structure and assessment. *Annual Review of Psychology, 31,* 503-551.

Jones, E.E., & Davis, K.E. (1965). From acts to dispositions: The attribution process in person perception. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 2). New York: Academic.

Jones, E.E., & Gerard, H.B. (1967). *Foundations of social psychology.* New York: Wiley.

173

Jones, E.E., & McGillis, D. (1976). Correspondent inferences and the attribution cube: A comparative reappraisal. In J.H. Harvey, W.J. Ickes, and R.F. Kidd (Eds.), *New directions in attribution research* (Vol. 1). Hillsdale, NJ: Erlbaum.

Jöreskog, K.G., & Sörbom, D. (1984). *LISREL VI: Analysis of linear structural relationships by the method of maximum likelihood*. Mooresville, IN: Scientific Software.

Kahneman, D., & Tversky, A. (1973). On the psychology of prediction. *Psychological Review, 80*, 237-251.

Kelley, H.H. (1950). The warm-cold variable in first impressions of persons. *Journal of Personality, 18*, 431-439.

Kelley, H.H. (1967). Attribution theory in social psychology. In D. Levine (Ed.), *Nebraska symposium on motivation* (Vol. 15). Lincoln: University of Nebraska Press.

Kelley, H.H. (1971). *Attribution in social interaction*. Morristown, NJ: General Learning Press.

Kelley, H.H. (1972). Attribution in social interaction. In E.E. Jones, D.E. Kanouse, H.H. Kelley, R.E. Nisbett, S. Valins, & B. Weiner (Eds.), *Attributions: Perceiving the causes of behavior*. Morristown, NJ: General Learning Press.

Kelley, H.H. (1973). The processes of causal attribution. *American Psychologist, 28*, 107-128.

Kelly, G.A. (1963). *A theory of personality*. New York: Norton.

Langer, E.J. (1975). The illusion of control. *Journal of Personality & Social Psychology, 32*, 311-328.

Lefcourt, H.M. (1972). Internal versus external control of reinforcement revisited: Recent developments. In B.A. Maher (Ed.), *Progress in experimental personality research* (Vol. 6). New York: Academic.

Lerner, M.J., & Miller, D.T. (1978). Just world research and the attribution process: Looking back and looking ahead. *Psychological Bulletin, 85*, 1030-1051.

Lewin, K. (1935). *Dynamic theory of personality*. New York: McGraw-Hill.

Martin, M., & Clark, D.M. (1985). Cognitive mediation of depressed mood and neuroticism. *IRCS Medical Science: Psychology & Psychiatry, 13*, 352-353.

Matlin, M., & Stang, D. (1978). *The Pollyanna principle*. Cambridge, MA: Schenkman.

174

McArthur, L.Z., & Solomon, L.K. (1978). Perceptions of an aggressive encounter as a function of the victim's salience and the perceiver's arousal. *Journal of Personality and Social Psychology, 36,* 1278-1290.

McAulay, E., & Gross, J.B. (1983). Perceptions of causality in sport: An application of the Causal Dimension Scale. *Journal of Sport Psychology, 5,* 72-76.

McAulay, E., Duncan, T.E., & Russell, D.W. (1991). Measuring causal attributions: The Revised Causal Dimension Scale (CDSII). *Personality and Social Psychology Bulletin,*

Metalsky, G., & Abramson, L. (1981). Attributional style: Toward a framework for conceptualization and assessment. In P. Kendall & S. Hollon (Eds.), *Assessment strategies for cognitive-behavioral interventions* (pp. 13-58). New York: Academic.

Meyer, J.P. (1980). Causal attributions for success and failure: A multivariate investigation of dimensionality, formation, and consequences. *Journal of Personality and Social Psychology, 38,* 704-715.

Meyer, J.P., & Mulherin, A. (1980). From attribution to helping: An analysis of the mediating effects of affect on expectancy. *Journal of Personality and Social Psychology, 39,* 201-210.

Miller, I.W., Klee, S.H., & Norman, W.H. (1982). Depressed and nondepressed inpatients' cognitions of hypothetical events, experimental tasks, and stressful life events. *Journal of Abnormal Psychology, 91,* 78-81.

Mischel, W. (1968). *Personality and assessment.* New York: Wiley.

Mischel, W. (1969). Continuity and change in personality. *American Psychologist, 24,* 1012-1018.

Mischel, W. (1973). Toward a cognitive social learning reconceptualization of personality. *Psychological Review, 80,* 252-283.

Mischel, W. (1974). Processes in delay of gratification. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 7). New York: Academic

Mischel, W. (1979). On the interface of cognition and personality: Beyond the person-situation debate. *American Psychologist, 34,* 740-754.

Mischel, W., & Peake, P.K. (1982). Beyond déjà vu in the search for cross-situational consistency. *Psychological Review, 89,* 730-755.

Mitchell, J.V. (1989). Personality correlates of attributional style. *The Journal of Psychology, 123,* 447-463.

Mudrack, P.E. (1990). Machiavellianism and locus of control: A meta-analytic review. *Journal of Social Psychology, 130,* 125-126.

Murray, H.A. (1938). *Explorations in personality.* Cambridge, MA: Harvard University Press.

Newcomb, T.M. (1929). *The consistency of certain extrovert-introvert behavior patterns in 51 problem boys.* New York: Columbia University, Teachers College, Bureau of Publications.

Nezu, A.M., Nezu, C.M., & Nezu, V.A. (1986). Depression, general distress, and causal attributions among university students. *Journal of Abnormal Psychology, 94,* 184-186.

Nozick, R. (1981). *Philosophical explanations.* Cambridge, MA: Harvard University Press.

Oetting, E.R., & Deffenbacher, J.L. (1980). *Test Anxiety Profile manual.* Fort Collins, CO: Rocky Mountain Behavioral Science Institute.

Passer, M.W., Kelley, H.H., & Michela, J.L. (1978). Multidimensional scaling of the causes for negative interpersonal behavior. *Journal of Personality and Social Psychology, 36,* 951-962.

Passini, F.T., & Norman, W.T. (1966). A universal conception of personality structure? *Journal of Personality and Social Psychology, 4,* 44-49.

Perloff, J.M., & Persons, J.B. (1988). Biases resulting from the use of indexes: An application to attributional style and depression. *Psychological Bulletin, 103,* 95-104.

Peterson, C. (1991). The meaning and measurement of explanatory style. *Psychological Inquiry*

Peterson, C., Schwartz, S.M., & Seligman, M.E.P. (1981). Self-blame and depressive symptoms. *Journal of Personality and Social Psychology, 41,* 253-259.

Peterson, C., & Seligman, M.E.P. (1984). Causal explanations as a risk factor for depression: Theory and evidence. *Psychological Review, 91,* 347-374.

Peterson, C., Semmel, A., von Bayer, C., Abramson, L.Y., Metalsky, G.I., & Seligman, M.E.P. (1982). The Attributional Style Questionnaire. *Cognitive Therapy and Research, 6,* 287-299.

Peterson, C., & Villanova, P. (1988). An expanded attributional style questionnaire. *Journal of Abnormal Psychology, 97,* 87-89.

Piliavin, I.M., Rodin, J., & Piliavin, J.A. (1969). Good Samaritanism: An underground phenomenon? *Journal of Personality and Social Psychology, 13*, 289-299.

Reisenzein, R. (1986). A structural equation analysis of Weiner's attribution-affect model of helping behavior. *Journal of Personality and Social Psychology, 50*, 1123-1133.

Ross, L., & Anderson, C.A. (1982). Shortcomings in the attribution process: On the origins and maintenance of erroneous social assessments. In D. Kahneman, P. Slovic, & A. Tversky (Eds.), *Judgment under uncertainty: Heuristics and biases.* New York: Cambridge University Press.

Ross, L., & Nisbett, R.E. (1991). *The person and the situation: Perspectives of social psychology.* New York: McGraw-Hill.

Rotter, J.B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs, 80,* Whole No. 609.

Russell, D. (1982). The Causal Dimension Scale: A measure of how individuals perceive causes. *Journal of Personality and Social Psychology, 42,* 1137-1145.

Russell, D., McAulay, E., & Tarico, V. (1987). Measuring causal attributions for success and failure: A comparison of methodologies for assessing causal dimensions. *Journal of Personality and Social Psychology, 52,* 1248-1257.

Sanderman, R. (1986). Causal attributions, real life-events and personality characteristics: A preliminary study. *Psychological Reports, 59,* 795-801.

Schmidt, G., & Weiner, B. (1988). An attribution-affect-action theory of motivated behavior: Replications examining judgments of help-giving. *Personality and Social Psychology Bulletin, 14,* 610-621.

Schopler, J., & Matthews, M. (1965). The influence of perceived causal locus on partner's dependence on the use of interpersonal power. *Journal of Personality and Social Psychology, 2,* 609-612.

Schwartz, S.H., & Fleishman, J.A. (1978). Personal norms and the mediation of legitimacy effects on helping. *Social Psychology, 41,* 306-315.

Sears, D.O. (1983). The person-positivity bias. *Journal of Personality & Social Psychology, 44,* 233-250.

Seligman, M.E.P. (1975). *Helplessness.* San Francisco, CA: Freeman.

Seligman, M.E.P., Abramson, L.Y., Semmel, A., & von Baeyer, C. (1979). Depressive attributional style. *Journal of Abnormal Psychology, 88,* 242-247.

Shaver, K.G. (1975). *An introduction to attribution processes.* Cambridge, MA: Winthrop.

Shaver, K.G. (1985). *The attribution of blame. Causality, responsibility, and blameworthiness.* New York: Springer-Verlag.

Shaver, K.G. (1987). *Principles of social psychology* (3rd Edition). Hillsdale, NJ: Erlbaum.

Sherman, S.J., & Corty, E. (1984). Cognitive heuristics. In R.S. Wyer and T. Srull (Eds.), *Handbook of social cognition.* Hillsdale, NJ: Erlbaum.

Shrauger, S., & Altrocchi, J. (1964). The personality of the perceiver as a factor in person perception. *Psychological Bulletin, 62,* 289-308.

Sosis, R.H. (1974). Internal-external control and the perception of responsibility of another for an accident. *Journal of Personality & Social Psychology, 30,* 393-399.

Spielberger, C.D., et al (1983). *Manual for the State-Trait Anxiety Inventory (STAI, Form Y).* Palo Alto, CA: Consulting Psychologists Press.

Spielberger, C.D., et al (1988). *State-Trait Anger Expression Inventory Manual.* Odessa, FL: Psychological Assessment Resources.

Sweeney, P.D., Anderson, K., & Bailey, S. (1986). Attributional style in depression: A meta-analytic review. *Journal of Personality and Social Psychology, 50,* 974-991.

Taylor, S.E., & Fiske, S.T. (1975). Point-of-view and perceptions of causality. *Journal of Personality and Social Psychology, 32,* 439-445.

Taylor, S.E., & Fiske, S.T. (1978). Salience, attention, and attribution: Top of the head phenomena. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 11). New York: Academic.

Thorndike, E.L. (1905). *The elements of psychology.* New York: A.G. Seiler.

Tversky, A., & Kahneman, D. (1974). Judgment under uncertainty: Heuristics and biases. *Science, 185,* 1124-1131.

Uleman, J.S. (1987). Consciousness and control: The case of spontaneous trait inferences. *Personality and Social Psychology Bulletin, 13,* 337-354.

Walster, E. (1966). Assignment of responsibility for an accident. *Journal of Personality and Social Psychology, 3,* 73-79.

Weiner, B. (1974). *Achievement motivation and attribution theory* (Ed.). Morristown, NJ: General Learning Press.

Weiner, B. (1979). A theory of motivation for some classroom experiences. *Journal of Educational Psychology, 71,* 3-25.

Weiner, B. (1980a). A cognitive (attributional)-emotion-action model of motivated behavior: An analysis of judgments of help-giving. *Journal of Personality and Social Psychology, 39,* 186-200.

Weiner, B. (1980b). May I borrow your class notes? An attributional analysis of judgments of help-giving in an achievement-related context. *Journal of Educational Psychology, 72,* 676-681.

Weiner, B. (1986). *An attributional theory of motivation and emotion.* New York: Springer-Verlag.

Weiner, B., Frieze, I.H., Kukla, A., Reed, L., Rest, S., & Rosenbaum, R.M. (1972). *Perceiving the causes of success and failure.* Morristown, NJ: General Learning Press.

Weiner, B., & Kukla, A. (1970). An attributional analysis of achievement motivation. *Journal of Personality and Social Psychology, 15,* 1-15.

Weiner, B., Perry, R.P., & Magnusson, J. (1988). An attributional analysis of reactions to stigmas. *Journal of Personality and Social Psychology, 55,* 738-748.

Weiner, B., Russell, D., & Lerman, D. (1978). Affective consequences of causal ascriptions. In J.H. Harvey, W.J. Ickes, & R.F. Kidd (Eds.), *New directions in attribution research* (Vol. 2, pp. 59-88). Hillsdale, NJ: Erlbaum.

Weiner, B., Russell, D., & Lerman, D. (1979). The cognition-emotion process in achievement-related contexts. *Journal of Personality and Social Psychology, 37,* 1211-1220.

Wicklund, R.A., & Frey, D. (1981). Cognitive consistency: Motivational vs non-motivational perspectives. In J. P. Forgas (Ed.), *Social cognition: Perspectives on everyday understanding.* New York: Academic.

Winter, L., & Uleman, J.S. (1984). When are social judgments made? Evidence for the spontaneousness of trait inferences. *Journal of Personality and Social Psychology, 47,* 237-252.

Wong, P.T.P., & Weiner, B. (1981). When people ask "why" questions and the heuristics of attributional search. *Journal of Personality and Social Psychology, 40,* 650-663.