Order Number 8801770

Social support and bereavement: An inquiry into how psychosocial assets predict outcome

Torian, Lucia VanOgle, Ph.D.

City University of New York, 1987

U·M·I
300 N. Zeeb Rd.
Ann Arbor, MI 48106

SOCIAL SUPPORT AND BEREAVEMENT
An Inquiry into how Psychosocial Assets Predict Outcome

by

Lucia VanOgle Torian

A dissertation submitted to the Graduate Faculty in Sociology in partial fulfillment of the requirements for the degree of Doctor of Philosophy, The City University of New York.

1987

This manuscript has been read and accepted for the Graduate Faculty in Sociology in satisfaction of the dissertation requirement for the degree of Doctor of Philosophy.

29 September 1987
Date

Suzanne C. Ouellette Kobasa
Chair of Examining Committee

Sept. 29 / 87
Date

Executive Officer

Charles Kadushin

Suzanne C. O. Kobasa

Lindsey Churchill
Supervisory Committee

The City University of New York

Abstract

SOCIAL SUPPORT AND BEREAVEMENT
An Inquiry into how Psychosocial Assets Predict Outcome

by

Lucia VanOgle Torian

Adviser: Charles Kadushin

Previous studies have implicated social support as a mediator of stress or the morbid sequelae of stressors. We suggest that stress reactions and social support are effects of stable personality factors and that social support not be approached in the traditional way but rather as a dependent variable. Demographic, psychosocial and mental and physiological health variables of 168 widows were compared. The majority of subjects were members of hospital-sponsored widows' support groups. The remainder served as community controls. The Horowitz Impact of Event Scale (IOE) was administered to all subjects as part of an in-depth interview. Group members had significantly higher intrusion subsets than controls, and controls had significantly higher avoidance subsets than group members. Women with internal Locus of Control (LOC) fared better on the IOE than women with external IOE; however, women with external LOC in the conjtrol group did better than women with external LOC in the support group. This suggests that group membership has variant meaning and consequences and that stable personality factors predict modes of networking and social support as well as mental health.

INTRODUCTION

Classical epidemiology holds that sociodemographic variables interact with the physical and microbial environment to affect morbidity and mortality (Lilienfeld & Lilienfeld, 1980; Bell, 1975; Antonovsky, 1972; Berkman and Syme, 1976). Psychological factors such as hardiness (Kobasa, 1979) and fatalism (Madsen, 1969) and the presence of an internal or external locus of control (Wheaton, 1982; Houston, 1979) as well as modes of cognitive attribution (Thoits, 1982; Schachter, 1964; Liu, 1986) constitute additional mediators.

It has also been proposed that social support acts as a "buffer" which protects the individual from stress itself or from the potentially morbid sequelae of stressors. The mechanism for this protective effect has not been described. Nevertheless, numerous studies identify some positive association between affection, companionship, intimacy, social integration, networking and good health.

Controlled experiments on laboratory animals provided the first systematic clues that such an association was more than fortuitous. Tolerance for extreme physical distress is enhanced by control (Thompson, 1981) and by the presence of a partner (Seidman, et al., 1956). Cellular immunity, apparently suppressed during experimentally induced isolation, returns to normal when maternal companionship is restored (Jemmot and Locke, 1984). Prospective studies of immune competence, mostly on college students, show differential outcomes the only explanation

for which appears to lie in constitutional or emotional variation. Stress-induced analgesia probably compromises immunity as endorphins bind to opiate receptors on lymphocytes. Bereavement joins a host of other traumatic events (Kraus and Lilienthal, 1959; Erikson, 1976) in conferring increased risk of morbidity and mortality due to infectious disease, accidents, fractures, complications of chronic conditions, heart disease and mental illness (Helsing and Szklo, 1981; MacMahon and Pugh, 1965; Stein and Susser, 1969; Stein, Schleifer and McKegney, 1979).

We are told by every conceivable medium that stress is bad for our health, and there are countless stories about divorce, suicide, and heart attacks following in the wake of corporate raids, layoffs, floods, crime and military service, but, as in the case with pathogenic microbes, not every victim gets sick. This is a study about the different assets people bring to bear on a personal disaster--the death of their husband--and how these assets serve as predictor variables for subsequent well-being. Our particular focus is on social support and personal assets with which it is, we believe, inextricably intertwined. We hope to shed some light on differential outcome. This paper is not about grief but about surviving a life event.

The study was animated by two sets of literature--the literature which proposes connections between life events and morbidity and the literature which celebrates the salutary role of social support in the prevention and amelioration of morbid sequelae. An instrument was devised to assess the variety of sources of social support actually used or known to be dependable

by two groups of widows in upstate New York. One group was composed of women who were members of support groups sponsored by the local hospital (where everyone who is sick enough to be hospitalized is exposed to social service); the other comprised a control group of widows who were bereaved about the same amount of time (range 6 months to 4 years) but were not members of support groups. The first object was to compare demographic profiles and the kinds of support available to the two groups of women. Why did people join support groups--was it because they had nobody else? Were non-members hardier, more independent copers? The next object was to compare outcomes in the two groups. The Horowitz Impact of Event Scale (1979) and our own scale measuring health (integrating doctor's visits, non-discretionary hospitalizations, and substance and pharmaceutical use) were used as dual outcome measures since we were interested in physiological well-being as well as mental health. We were also interested in the fit between the two outcome measures and their variant expressions in subgroups defined by income, education, age, personality and support variables, etc., and how and whether they could reveal any differences between the group members and the controls. Chi-square analysis was used to rule out independence and suggest potentially interesting associations. A factor analysis was performed to measure loading strength of variables proposed to constitute a "favored status" set which would predict good health. Multiple regression was also performed on this set. Reliability testing produced a statistic of fairly high internal consistency for this variable

(alpha = .7113), but the variable itself did more to predict assets than health. Two-tailed Student's t-test was used to discriminate mean differences for the support group and the control group. ANOVA suggested the discriminant role of locus of control on group membership, social support and outcome. Multiple combinations of means were compared using Scheffe's test.

In the end, sociodemography was less illuminating than we had hoped--the only "background" variable with any predictive weight for mental health was self-reported physical health, and physical health was one of the dependent variables! We began to test physical health from two angles--it switched places in the analysis, serving sometimes as a dependent and other times as an independent variable. We found that as an independent variable self-reported health was strongly associated with Impact of Event scores, and that income, education, and professional employment were all strongly associated with each other and with good self-reported health. However, physical health as a dependent variable--gauged by us on an set of objective measures--physician visits, hospitalizations, etc., was only weakly related to IOE, thus lending some credence to the theory that perceived status--in this case perceived health status--is more closely associated with mental health than actual status (Wethington and Kessler, 1986), assuming that mental health is accurately reflected by the IOE. Although we are happy with the IOE as a measure of event-specific affect, it was not intended to be used as a reflection of general mental health, particularly when administered only

once--which the authors discourage (Zilberg, Weiss and Horowitz, 1982). We also suspect that the time frame during which intrusive events can be expected to occur and require some coping efforts is underestimated and that total and subset scores can be subjected to a variety of legitimate interpretations. As with most research, as our data analysis gained momentum it generated many questions.

As we were developing instrumentation we were aware of the need for a fall-back position. We doubted that we would get an affirmative answer to our question, do members of support groups do better than nonmembers, since some literature suggests that combinations and possible additive effects of independent variables should be explored (Kobasa, Maddi and Courington, 1981)? Our secondary hypothesis was that certain sociodemographic assets, independent of social support, would predict outcome and might even predict social support. But should our hypotheses about social support and socioeconomic assets fail to be born out, could we produce anything that illuminated the variant outcomes? The instrument contained a "locus of control" (Wheaton, 1982) question not so much for any diagnostic clues but to see whether support group members were more dependent upon others in their coping style than were controls. We learned that support group members were more internally oriented than were controls, leading us to speculate that independent coping did not necessarily shut out social support. This measure had some further unexpected fall out--locus of control (LOC) predicted outcome in both mental and physiological health better

than did any other variable, lending credence to the popular view that "attitude is everything." In addition, LOC predicted social assets aside from group membership and led us to speculate that independent copers have social support because both their personality and coping style lead to positive outcomes which attract support.

Symbolic interaction and network theory provide the conceptual framework for the study. We propose that individuation results in identity composed of a variety of roles and areas of competence and that this multiplexity is the source of autonomy and resilience. Identity is a function of cognition, work and social bonding and it is enhanced by continuous networking which holds in readiness potential information, cooperation and collaboration, advice, practical help, personal affirmation and affection and companionship. Catastrophic life events destroy multiplexity and result in reductive identity and diminished social competence--these are easily recognized as Goffman's psychological concomitants of "stigma." In addition, they cut ties to significant others and to society at large in the sense that they demoralize and they destroy social identity. Repair is the process of recovering multiplexity and morale and rebonding oneself to society at large and to the immediate, micro-social environment. We further propose that the support group, aside from legitimating social and psychological stress, serves as a place to start practicing re-networking and re-bonding.

Our findings are, of course, much more detailed. We

present them in a format in which a theoretical and conceptual justification precedes a complete description and discussion of the study. Part I contains a review of the relevant literature and a justification of the study's theoretical underpinnings. Part II reports the study results.

TABLE OF CONTENTS

LIST OF TABLES

I
STRESS AND COPING

In recent years the connection between stressful life events and health has been explored with increasing enthusiasm both in the field and in the laboratory. Since the immune system is the best known, most studied modulator of morbidity due to infection and cancer, much of the literature is based on outcomes measured by immune parameters. None of this disposes of the probability that etiology is more complex than we presently know.

A central problem with this research revolves around the definition of stress. Life events:morbidity findings have been questioned on two further fronts. (1) Most rely on retrospective association of life events with subsequent illness, a connection study subjects seem to make readily and (2) the fact that in some research all life events appear to generate some stress begs the question--since the events and morbidity occur in the same life, they must somehow be connected.

The next section will review and select a working definition of stress from the literature. Following this, we will discuss some highlights in the research finding etiological and mediative links between psychological, social and demographic factors, personality and health. We will then consider the particular role of social support as a protective asset against morbidity.

That mind and body were somehow connected was known by the ancient Greeks, but the immunosuppressive effect of sustained adrenal arousal was not described until 1936 (Seyle, 1936). Evidence showing adrenergic inflammatory restraint and ulcerogenesis led to speculation that (1) the continuously

aroused system would ultimately reach a state of exhaustion leading to susceptibility to pathogens and other immune-mediated disorders and that (2) if people could control both their exposure and arousal in response to stressors (Selye 1936, 1957) they would be healthier. Subsequent studies added vasospasm, coagulopathy and neoplasia to the list of stress-related health problems (JAMA, 1986), and speculation began to widen that "the neuroendocrine changes associated with stressors may mediate pathological processes in a broad range of somatic and psychiatric illnesses" (Dean & Lin, 1977).

Recent research on animals subjected to loud noises, electroshock and other damaging experiences has produced evidence of deleterious sequelae ranging from learned helplessness (Seligman and Maier, 1967) to impaired phagocytosis (Borysenko and Borysenko, 1982; Monjan, 1981). Infant animals subject to experimental isolation have shown poor immune function profiles until returned to their mothers (Stein, Keller & Schleifer, 1981). Crowding has increased the incidence of maternal and infant mortality, arteriosclerotic heart disease, neoplasia and resistence to pathogens (Cassel, 1976). Other studies suggest that some aspects of immune responsivity can be behaviorally conditioned (Ader & Cohen, 1975, 1981) and that no events are universally stressful but rather mediated by a host of physiological, individual and circumstantial factors (Fleming, Baum & Singer, 1984).

Restraints imposed by ethical principles have limited experimental studies on humans (Callahan, 1986). Nevertheless,

some research has been done. It has been learned, for example, that sleep deprivation and overexercise have both physiological and psychological sequelae which are associated with immunosuppression. In addition, certain psychosocial stressors violating normal expectations or requiring massive social readjustment--e.g., disasters, combat and being in a concentration camp--have been associated with increased morbidity. Depression appears to stimulate the secretion of Beta-endorphins which bind to opiate receptors on lymphocytes, possibly accounting for the association between depressive illness and susceptibility to pathogens currently under investigation (Risenberg, 1986).

There are two main schools of thought about defining stress, the life events and the traumatic events schools. The life events school is inspired by the Holmes-Rahe hypothesis that any event heralding change and requiring social adjustment is stressful. Change in itself is threatening; some changes are more threatening than others. The Holmes-Rahe Social Readjustment Rating Scale rates life events in terms of the magnitude of readjustment demanded and thus the putative stress. Items include change in conditions of basic survival, such as residence and employment, as well as changes in social bonding, such as marriage, birth and bereavement. The scale has been tested in various cultural settings. The most stressful event for American respondents was the death of a spouse; this was followed by divorce, separation and marriage. In El Salvador, marriage was rated as more stressful than bereavement. In a city recovering from an earthquake, "change in living conditions" was

rated as the number one stress (it was # 28 in the United States, where moving is frequent and often associated with promotion) and bereavement #15. The developers of the scale speculate that these variations may be due to cultural variables, to development versus underdevelopment, and to the propensity of poor residents of non-industrialized nations to place a greater emphasis on matters of survival while members of industrialized cultures have the luxury of concentrating on social bonding. But the earthquake victims placed a greater emphasis on living conditions than did people from a demographically and culturally comparable neighboring area that was spared the natural disaster. Thus subjective circumstance at the time of testing is a consideration in evaluating the relative magnitude of stressors.

In our opinion, several elements of the Holmes-Rahe stress definition/measure conspire to limit its usefulness. First, many events, while disequilibrating, fall well within the purview of peoples' coping resources; no mention is made of these resources, their stress-mediating effects, or the effect that variation in resources has on variation in outcome. Next, the definition of stress does not differentiate between life events which are stressful and life events which are traumatic (Freud, 1957; Lazarus, 1960). Finally, no differentiation between desirable and undesirable events (Vinokur and Selzer, 1975) is made, thus confounding the effect of elements other than change.

In our view, since very little of life remains at a stable equilibrium, change has to be seen as a concomitant of vitality and adaptation a concomitant of survival. In addition, much

change is initiated by individuals--people are more often active rather than passive partners in their own circumstances and experience. They generate and have imposed upon them numerous transactions with their environment throughout their lives--some of these transactions are nurturing, others pose some threat (Dohrenwend, Dohrenwend, Dodson and Shrout, 1978; Vinokur and Selzer, 1975)--most demand some sort of active engagement with the surrounding world. Each transaction is something of an event, and each event is evaluated by its participants. No action is taken until some significance is attached to the event and the effects of alternative responses available to the individual. Some benign events can be ignored. But all events, benign or malign, are evaluated in terms of the extent to which they present a demand for action.

The school of thought about life events which stands in opposition to the Holmes-Rahe construct looks at events not in terms of the adaptation required of the individual, but in terms of whether he has the resources to mount and sustain an appropriate response to the event. In this view, few events will tax us beyond our resources. Only those which do should be considered stressors (Lazarus, 1966, 1970).

Stress is a process (Pearlin et. al.,1981) in which cognition is the pivot point (Schachter, 1967; Lazarus, 1966). Appraisal of the event is a two-stage process involving (1) perceived potential damage to one's body, social bonds, life conditions, etc.; (2) the perceived adequacy or deficiency of coping resources (Lazarus, 1966). Perceived adequate personal resources can be mobilized and any threat neutralized--whether or

not resources actually are adequate appears to be inconsequential in many (but not all) events, since resources perceived to exceed the demands presented will result in the removal of the potential stressor (Lazarus, 1966; LaRocco, House and French, 1980).

The number and type of events as well as the kinds of response resources available to individuals vary from culture to culture. Even individuals in highly ritualized primitive cultures will experience events requiring some sort of cognitively mediated response, but in such environments response patterns are likely to be fairly static, predictable and most events subject to ritualization, while in contemporary culture a crisis results when the universe of alternatives available to the individual is very large or when none of the alternatives available can be expected to bring relief.

Events which bring about changes in the environment require cognitive appraisal and some decision as to whether to manipulate the environment to suit the individual or alter the individual's attitude toward the situation. This is called coping. There are three forms of coping (Thoits, 1983):

(1) Problem-focussed coping, in which one alters or masters the demands of the situation itself.

(2) Emotion-focussed coping, in which one alters or masters the affect generated by arousal.

(3) Perception-focussed coping, in which one alters his attitude toward the demands made--including possibly relabelling his arousal (French, Rogers and Cobb, 1974; Lazarus and Launier, 1978; Mechanic, 1977; Pearlin and Schooler, 1978).

Stress reactions are reflections of coping processes (Thoits, 1983), and coping is mediated by:

(1) the extent of the threat and perceived control or power to affect outcome (Thompson, 1981; Averill, 1973, Corah and Boffa, 1970; Glass et.al., 1969, 1971, 1973; Gatchel and Proctor, 1976)

(2) the perceived meaning and consequences of potential damage (Beecher, 1956; Melzack and Wall, 1956; Coates and Wortman, 1977).

(2) the extent of the intrusiveness of the short-term arousal (Lazarus, 1966)

(3) personal hardiness (Kobasa, 1979) and locus of control (Wheaton, 1983) and other constitutional factors (Jemmot & Locke, 1984)

(4) the nature of the social environment at large (Durkheim, 1956; Liu, 1986; Wellman, 1978)

(5) the nature of the micro-social environment (Dohrenwend and Dohrenwend, 1974; Rabkin and Streuning, 1978; Thoits, 1982, 1983; Leavy, 1980; Wethington and Kessler, 1986)

(6) the interaction of all of the above with sociodemographic variables such as income, education, and occupation (Jemmot and Locke, 1984)

Culture mediates coping through its pervasive effect on cognition and personality development. Painting with a very broad brush, we can describe societies in Durkheim's terms.

(1) Gemeinschaft societies are characterized by dense bonding, shared norms and values, the submersion of law in religion and individual personality in collective consciousness. Coping occurs at the collective level and consists predominantly of ritual.

(2) In contrast, Gesellschaft societies are characterized by unstable norms and values, the waning of religion and the rise of secular law, the constant influx of changing technology into social relations, and very little ritual stability. The cognitive universe is unlimited--there is freedom, diversity, creativity--

but everything is also cast into doubt. Nothing is sacred, and nothing admits of simple explanations. The global umbrella is gone. There is plenty of choice--maybe too much. Suddenly it is possible to have a personal crisis. But whether contemporary life is stressful or not, or bad for one's mental health, is in great dispute. The transition to industrialization is apparently accompanied by the sudden appearance of anxiety and other neuroses in formerly serene individuals, but the incidence and prevalence of psychoses remains both low and stable (Murphy and Tambopeau, 1967; Liu, 1986). Although primitive gemeinschaft societies are probably fairly pure, gesellschaft societies mix business with gemeinschaft elements in micro-social institutions from the family to the workplace.

A certain amount of gemeinschaft is critical for personality (Erikson, 1965) and intellectual development (Cobb, 1976). Pockets of gemeinschaft emerge spontaneously even in the most businesslike settings (Blau, 1949) for the exchange of ideas, information and affection (Crowne and Marlowe, 1967; Cobb, 1976). In addition, the social support people receive from their gemeinschaft ties appear to enhance effective coping and ameliorate stress in their gesellschaft lives (LaRocco, House and French, 1980). This disputed pervasive effect will be discussed presently.

To summarize, we define stress in terms of the taxation levied upon personal coping resources and the adequacy of their response--this does not mean that there are no "objective" stressors but that the stress in life is constituted by the individual's interaction with events or circumstances. The

stress as reaction is distinct from daily hassles and from life events per se, and it distinguishes between desirable and undesirable events. It is distinct from the concept of risk, but certain kinds of coping resources are "risky" in the sense that they do not work and put the individual at risk of demoralization and disorder. Certain personality disorders are associated with ineffective coping which results in risk, or vulnerability (Kohn, 1972). Certain sociodemographic characteristics are associated with ineffective coping resulting in risk. Our emphasis of cognitive relativity and individual volition is probably justified in the context of a highly industrialized libertarian bourgeois civil society, despite some arguments citing sociodemography as determinative.

Are there situations which defeat even the "best" copers and which question this reactive definition? There is evidence to believe that under some extreme conditions anyone is likely to break down (Kadushin, 1983)--conditions which violate all reasonable expectations, norms and values, conditions which destroy significant social bonds, conditions which result in the loss of civil status. Conditions, which are, in short, traumatic. Anybody is likely to break down in combat, in a concentration camp, during or after a natural disaster. But not everyone does--so the event itself is inadequate explanation for individual outcome. By the same token, people break down in the face of "stressors" or challenges to which others response with resilience. The DSM III (1983) has codified stressors in terms of the intensity with which they assault individual integrity,

bonds, and expectations, but even these levels are subject to interpretive discretion in clinical settings. The death of a significant other is an example of an "extreme" stressor. Despite the fact that it feels catastrophic, it is not a catastrophe. It is a normal event, unlike being in a concentration camp, experiencing a devastating natural disaster, or being in combat. Bereavement shares with the latter a set of, however temporary, somatic and psychological symptoms (anorexia, sleep disturbance, anxiety, depression, inability to concentrate, poor social bonding) and is associated with susceptibility to a wide range of somatic and psychological disorders. A variety of studies has suggested that some combination of personal hardiness and social support protects against morbidity associated with bereavement. We will take these up in some detail. First, we discuss the Impact of Event Scale as a measure of ongoing subjective stress. In the following section, we examine further the link between stress and illness; then we look at the purported protective effect of social support.

IMPACT OF EVENT SCALE AS A MEASURE OF STRESS

The Impact of Event Scale was first presented in response to its authors' proposal that current measures of natural and experimental stress could not measure impact over time (Horowitz, Wilner and Alvarez, 1979). Some indication of coping efforts, repair/reequilibration/re-engagement was thought to offer a better measurement of both the long-term intrusive effects of the stressor and the efficacy of the subject's response. We decided

to use the scale for two reasons--(1) It is highly internally consistent, its construct validity has been repeatedly affirmed, and it is used by investigators across America in a wide variety of situations, including bereavement (Zilberg, Weiss and Horowitz, 1982; Wortman, 1983). (2) We concur with the authors' reevaluation that total and subset measurements are open to a variety of interpretations and statistical treatments, and we conclude and develop our view that this constitutes an issue of some methodological and theoretical interest.

The scale consists of twenty questions which are designed to elicit data on two broad categories of experience--there are intrusion measures, which test cognition and affect--and avoidance measures, which test the extent to which the individual is constrained to and actually does engage in behavior which deliberately "doses" him with tolerable levels of intrusive content (Zilberg, Weiss and Horowitz, 1982). His management of painful thought, feelings, and images ultimately permits his progress to "adaptive completion"(Horowitz and Kaltreider, 1980).

Continuous research on the scale disclosed variant subscale correlations in groups of people characterized by different types of emotional dispositions--none of them high enough to meet minimum standards (Chronbach, 1969) but interesting enough to stimulate speculation that a total score does not necessarily measure total distress since one subscale measures the extent to which painful thoughts intrude on the subject's consciousness, while the other can indicate either denial or effective management. Over time, it is possible that intrusion scores may

allow investigators to decide which of these has been the case, but the expectation will be that most normal subjects will experience a diminution of intrusive symptomatology and a proportionate diminution of demands to manage symptomatology over a period of time--i.e., their scores will drop.

We submit that moderate to high avoidance scores can indicate either that the level of instrusive symptomatology is so high that some action to screen the flow of input must be taken so that the subject can do his grief (or adjustment) work of whatever kind without being overwhelmed by painful stimuli or that avoidance is a coping resource. In the latter case, denial has to be suspected, especially if also indicated by other features of the subject's data set. But high avoidance scores do not necessarily indicate denial--and therefore possibly ineffective coping--since each positive answer validates a painful stimulus which must somehow be managed. We would expect high levels of intrusion to be associated with the relative currency of the event and thus we would hope to be able to estimate the time of the event from the Impact of Event score. But we would produce false negatives for those who experience numbing as an early response and false negatives for people at any stage who are frozen in denial.

Valid scores should diminish over time as the subject/victim regains emotional equilibrium. A high avoidance score 4-5 years after the death is probably indicative of maladaptive coping and may or may not indicate uncontrolled intrusion. Psychologists would want to perform an independent clinical evaluation before validating any sort of "diagnosis"

suggested by the scale, and people doing research, although not under pressure to deliver a clinical judgment, would also be interested in confirmation.

In the present study we wanted to test the validity of the IOE against the subjects' assessment of their own mental status. In this case, the Impact of Event score and a self-reported assessment of depression achieved a very high correlation coefficient (.91), so we used the IOE alone. However, this was not the only dependent variable. Since the stress:illness connection includes physiological disorders as well as emotional distress, we decided to measure physical health as well, and we devised a scale in which the annual number of physician visits, annual number of non-elective operations, including the setting of fractures, and weekly use of both necessary and discretionary pharmaceuticals were tabulated. We also asked the respondents to rate their health, and their ratings of excellent, good, fair, or poor, achieved a high correlation coefficient (.876) when associated with the objective measure. Excellent health was, however, only moderately (-.457) associated with a low IOE score for the entire sample, although it was strongly associated with high income, being well educated, having a professional job, having young children, and being bereaved for more than two years--giving some credence to the Holmes-Rahe two year stress period (1974) and squaring with Israeli findings that hard grief work takes about two years, and that after about five years people can get on with their lives (Amir and Sharon, 1978). We make these points during this theoretical section to underscore

the complexity of measuring well-being with one instrument, even one which is as "tried and true" as the IOE.

II
STRESS, COPING AND HEALTH

What kind of evidence supports the stress-illness connection? Early studies showed that emotional arousal resulted in adrenergic surge with concomitant cardiovascular mobilization, thymic suppression and mucosal ulcerogenesis (Selye, 1936, 1957). A cascade of possible secondary events could be predicted. These included tachycardia, elevated blood pressure, vasospasm and coagulopathies; humoral and cell-mediated immunologic incompetence, especially in surveillance and regulation, concomitant vulnerability to pathogenic microbes, allergens, and autoimmune disorders, etc. In recent years speculation has become increasingly superfluous as the effects of experimental stressors are carefully documented in controlled trials at research laboratories throughout the world. In this section we will review some of the evidence and discuss the most-cited methodological problems in the field.

The first difficulty has been a variety of sometimes conflicting definitions of stress. While probably not confounding the findings (Schroeder and Costa, 1984), these inconsistencies have been impediments to lucidity and replication (Jemmot and Locke, 1984). In some studies, stress is a potentially damaging stimulus (Selye, 1950); in others it is a maladaptive response (Mason, 1975; Burchfield, 1979). In still others the term refers to the cascade of somatic and psychological events which results from the interaction between a

potentially noxious event and an inoperative response--stress being the sequel to one's failure to manage the situation effectively. However, all these outcome-oriented definitions have at base at least the hope of a stimulus with standardized noxious qualities--thus, some objective untoward event. Even these have been shown to be mediated by a variety of social and psychological factors, such as having company (Seligman et.al., 1967) or being told that one has control over the stimulus but that the investigator would prefer that the subject continue to endure it (for a review of the "control" literature, see Thompson, 1981). Few of these studies fail to demonstrate or imply that physiology is mediated by psychology, but none has yet described the precise pathway. In addition, most human studies have been retrospective and suffer from the absence of any baseline findings as well as the difficulties encountered when sick people are encouraged to attribute their illness to precedent life events. Prospective studies of normal populations are underway and promise to rectify some of these problems.

The majority of recent reviews concur that there is good evidence to believe that exposure to high levels of life stress is somehow associated with significantly greater morbidity than is exposure to low levels of stress (Dohrenwend and Dohrenwend, 1974; Holmes and Rahe, 1967; Holmes and Masuda, 1974; Rabkin and Streuning, 1976). Stress has been associated with poor mental health (Brown, 1978) and depression with passivity and immunosuppressive opioid activity (Maier and Laudenslager, 1985)

and poor health in general (Vaillant, 1979) accompanied by passive health-seeking behavior (Cockerhan et. al., 1986). Poor mental and physical health have long been connected to demographic variables such as poverty (Brown, 1978; Smith, 1864), low levels of education (Kitagawa and Hauser, 1973;Berkman and Syme, 1976), unemployment (Marmot and McDowall, 1986; LaRocco, House and French, 1981) and now corporate raids (Ambler, 1986). Poor mental health, including depression, schizophrenia and suicide, has been associated with small, high density, rigid primary circles in which failure to selectively screen the environment and inoperative coping responses are nurtured (Kohn, 1972). Poor mental health, particularly depression, has recently been associated with increased susceptibility to immune-mediated infectious disease and neoplastic disorder in that natural killer cell and beta-lymphocyte opiate receptors take up beta-endorphin secreted by depressed people (Locke, 1984; Stein, 1985).

The strongest predictor of poor mental health is not the presence of stress but prior poor mental health (Williams et al., 1981)--this emphasizes the need for good baseline data and for some resolution of the problems created by retrospective self-report which is frequently contaminated by neuroticism and variable excesses in attention to physical symptoms (Mechanic, 1974; Schroeder and Costa, 1984) and misattribution of etiology (Jemmot and Locke, 1984). Experimental studies obviate this problem but also fail to illuminate the effects of "natural" stressors. Longitudinal studies in which baseline data are compared to data collected at subsequent intervals would eliminate this problem but add the problem of being unable to

control and thus to match stressors. These studies would also have to account for sociodemographic variables and how people perceive and mobilize their resources and thus either cope or end up being stressed.

As personality variables receive more and more attention -- e.g., "good copers" have significantly better natural killer cell levels than "poor copers" (Risenberg, 1986)-- psychoneuroimmunology begins to synthesize more data supporting the powerful influence of personality mediation of disease. Since lymphoid tissues are richly autonomically innervated, they are subject to corticoids, catecholamines amd immunomodulating opioid peptides (Locke, 1984), it is indeed possible that "the extent of behavioral control over the event may be more important than the event itself" (Risenberg, 1986).

How does the immune system work? It is responsible for a vast number of functions only now beginning to be understood (Sherman and Sherman, 1979)--including being responsible for recognizing and remembering foreign antigens, for differentiating between noxious antigens and so-called commensals, for proliferating swiftly when needed, for producing neutralizing chemicals, and for the sequestration and destruction of both pathogens and, it is thought, some obsolete and deranged cells. Two large families of reactions are distinguished- humoral responses and those which are "cell mediated." Humoral responses occur rapidly as beta-lymphocytes synthesize and circulate immune globulins (antibody) both on a continuous basis and in response to contact with antigens. Antibody protects by

coating bacterial cell walls or viral envelopes to prepare them for phagocytosis or by chemically neutralizing endotoxins. T-lymphocytes are responsible for the slower cell-mediated immune responses and initiate the production of cytotoxic chemicals which also support phagocytosis. T-cell subsets maintain the delicate balance between agressive defensive activity and mindful surveillance. Immune function is multifocal and interactive. No single parameter can distinguish competency or compromise in vitro. We know that something isn't working properly we someone gets an infection, an allergic reaction, or leukemia. We can measure some activities which denote immune responsivity--and these can be behaviorally conditioned in animals (Ader and Cohen, 1975, 1981)--these include levels of circulating antibody, lymphocyte cytotoxicity and proliferative mitogen response (Monjan, 1981). In addition, the t-cell subsets responsible for turning on and enhancing humoral response to invasion by foreign antigens and then for turning it off when the job is done are particular targets of viruses thought to be mediated by depression (Risenberg, 1986). These helpers and suppressors maintain a delicate balance between initiating aggressive defensive activity and watchful surveillance. Altered distribution is pathognomonic of AIDS and some other conditions of immune compromise. Natural killer cells constitute a natural defense against cancer as they control neoplastic propensity by literally ingesting cancer cells. Immune competence is known to be influenced by age, genetics, nutrition, temperature, circadian rhythm, drugs, and other factors (Jemmot and Locke, 1984). Lymphoid tissue is also richly innervated by the autonomic

nervous system, but exactly how the CNS mediates susceptibility to microbes, allergies, neoplastic and autoimmune disease is not known. But the evidence from both laboratory animals and humans exposed to natural "stressors" is strong.

Lymphocytes of rats given inescapable shocks proliferate more poorly than those of unshocked control rats and rats given escapable shocks (Science, 1983). Crowding, restraint, noise, perceived exposure to a predator and other experimentally induced stressors increase susceptibility to infectious disease (Borysenko and Borysenko, 1982; Rogers et.al., 1979 and the rate of growth of implanted tumors (Labarba, 1970; Riley, 1975). Most of the conflicting findings in the animal research literature are thought to be the result of inconsistent definition and application of stressors and data collection (Jemmot and Locke, 1984).

Apollo astronauts' total white blood counts were higher after splashdown than pre-flight, but their (phytohemagglutinin-stimulated) mitogen response levels were unchanged (Fischer et. al., 1972). In contrast, skylab astronauts showed normal PHA response during flight but slower responses 1-2 hours after splashdown. They showed high white cell counts with differentials including a shift to the left and fewer t-cells circulating than pre-flight (Kinzey, 1975; Kinzey et.al., 1975). Cortisol and catecholamine levels were also elevated (Leach and Rambaut, 1974). Whether these findings could be due to stress (after all, these men are trained to do this job, few of their expectations are violated, and they have the resources to cope

with the demands made upon them) or are the results of physiological responses to speed, vibration, impact, air pressure or other physical phenomena is not specified--but this literature is used to support the stress:immune function link. Palmblad et. al. (1976) exposed men to a 77-hour vigil in simulated battle conditions and compared immune parameters one day before, during, and five days after the experience. The bacterial phagocytotic capacity of polymorphonuclear leukocytes was seriously compromised. Urinary catecholamine and serum cortisol levels were increased and coagulation factors decreased during the battle but normal five days later. Sleep deprivation and noise are well known immune depressants, and they contributed a large measure of the stress in this study, as were feelings of helplessness over their lack of control of the situation.

Exposure to pathogens is necessary but not sufficient cause to become clinically sick. At the present, over one million people have been infected with HTLV-III/LAV, now called Human Immunodeficiency Virus (HIV), yet only 29,000 people have frank AIDS and 300,000 people the prodrome (MMWR, 1986). Not enough is known about the period between infection and clinical disease, nor about individual factors that mediate susceptibility, to predict whether the still well will eventually sicken or not. Yet if HIV is like any other pathogen, there is good reason to believe that not all who are infected will get sick, and recent research indicates that some, probably many of the infected are capable of producing neutralizing antibodies (Carey et al., 1987). Among people colonized with streptococci, 20-40% become sick (James, Badger and Dingle, 1960). Meditation

has protected against repeated administration of varicella zoster (Arch Int Med, 1985, 145:2110-2119). The mortality rate in 14th century plague-ridden Europe never exceeded 36%. Hepatitis B is both infectious and virulent but its clinical course varies. Constitutional factors (genetic, racial, individual) have been implicated in susceptibility to a variety of other infectious diseases, including malaria and tuberculosis (Bell, 1975).

Naturally occurring emotional stress appears to mediate immunity as significantly as does experimental stress. Increased susceptibility to infectious mononucleosis in baseline non-immunes was shown only by West Point cadets whose academic performance fell short of their own goals and their fathers expectations (Kasl, Evans and Niederman, 1979), and students with high ego strength made more rapid recoveries when they did get sick (Greenfield et.al., 1959). Separation of infants from their parents is associated with poor proliferation response and antibody production (Coe and Levine, 1982). In one double-blind experiment, college students' nares were sprayed either with saline or suspended virus. Emotionally disaffected students who believed that their emotions affect their physical status got more upper respiratory infections than did non-disaffected students or disaffected students who did not believe in emotional susceptibility (Jackson et.al., 1960). Chronic unhappiness has predicted herpes simplex outbreaks (Katcher, Brightman, Kuborsky and Sharp, 1973). Academic examinations bring on elevated cortisol and catecholamine levels and incidence of URI's (Jemmot and Locke, 1984) and a variety of somatic effects including

aphasia, dysphasia, fasciculations, diaphoresis, tachycardia, and apraxia.

Bereavement is associated with diminished humoral and cell-mediated immune responses. When compared to controls matched for age, sex and race, bereaved spouses showed poor responses to mitogens (PHA and Concanavilin A) at eight weeks after the death but not at two weeks (Bartrop, Lockhurst et.al., 1977). No differences in total white cell counts and subsets or cortisol levels was recorded, but the effect of the "ambient stress" attending protracted illness should be considered in such studies (Jammot and Locke, 1984). Husbands of women who died of breast cancer showed similar total count equivalents when tested at one month before and 5-7 weeks after the death, but T and B cells responded more poorly to mitogens after the death than before (Schleifer, Keeler, McKegney and Stein, 1979). One study found considerably more illness in men whose wives died of protracted rather than acute illness (Gerber, Ruslem, Hannon, Battin and Arkin, 1975), while recent NIMH monographs consider sudden rather than protracted death as more risky and bereaved men in general at higher risk than bereaved women and then only men at certain ages. Popular wisdom regards women as less resilient than men due to their traditional absence from the marketplace and also considers that having some time to prepare with anticipatory grief is a positive thing. Too much time, however, means additional suffering for the patient and the caretaker.

The literature describing research on the connection of life events with illness is fraught with inconsistency and conflict (for reviews, see Jemmot and Locke, 1984; Schroeder and Costa,

1984). Early research implicated life events requiring above a certain magnitude of readjustment--that is, requiring some intense adaptive or coping behavior--as bad for one's health (Holmes and Rahe, 1967; Holmes and Masuda, 1974; Dohrenwend and Dohrenwend, 1978). The at-risk stress period was two years (Holmes and Masuda, 1974). Stress was additive, cumulative. 89 of 96 (92%) of the major health changes recorded in study samples were associated with having additive life changes requiring readjustment in excess of a certain number of points on a scale from 1-100 (see the Social Readjustment Rating Scale reprinted on page 16). Life changes were associated with heart attacks (Rahe and Parkinson, 1971; Theorell and Rahe, 1971; Edwards, 1971), sudden cardiac death (Rahe and Lind, 1971), fractures (Tolefson, 1972), and leukemia in children (Wold, 1968). This research gave ammunition to the hypothesis that major life changes might require adaptive efforts that were somehow beyond the resources of the individual, particularly when piled upon each other, and that their failure to cope had direct physiological effects and/or resulted in chronic emotional and concomitant physiological arousal that culminated in exhaustion.

Most of these studies showed correlation coefficients in the range of 2. to .3 for life events and illness, and had as their chief methodological weakness a reliance on retrospective self report which was later shown to be heavily weighted in favor of arbitrarily attributing illness to precedent events. No putative connection could be verified on this basis, so investigators turned to prospective studies. Nearly all of them,

including Rahe's study of Navy seamen (1974) failed to demonstrate any acceptable level of association between life events and illness. Efforts were made to enrich the scale (Rahe and Arthur, 1978), and to develop models which took into account personality and social support and for the cumulative effect of events on resources (Kobasa et. al., 1982; Antonovsky, 1979), but prospective objective measures have failed to bear out the hypothesized connection (Theorell et. al., 1975; Goldberg and Comstock, 1976). Apart from the much-maligned retrospective report, what are the additional problems?

(1) many of the "events" on the scale can be construed as effects of the current illness--loss of appetite, sleep disturbance, sexual dysfunction, etc.(Schroeder and Costa, 1984)

(2) symptoms will not be reported or emphasized uniformly by people with similar physiological disorders. Some--well or sick--will endorse more signs of distress than others (Mechanic, 1974)

(3) people in psychological distress may attribute their distress to external events and will recall and interpret items to support this--the "neuroticism" contaminant (Schroeder and Costa, 1984).

We submit that most definitions of stress, as we have pointed out, are too nonspecific to be useful, and that the life events literature fails to prove its point because its umbrella is too wide. Some distinction must be made between life events for which ordinary coping activities suffice and events which exceed coping resources, and between events which exceed coping resources temporarily and those which are permanently

catastrophic. The stress literature concurs that stress is directly related to individual coping resources, individual neuroticism, individual locus of control, etc., and should be measured as a subjective construct. There are events which do stress people and do increase susceptibility to morbidity in general--combat, natural disasters, concentration camps (Elliott and Eisdorfer, 1982). But these universally stressful stressors produce variant outcomes (Biegel, Naparstek and Kahn, 1980). The paradigm appears to need reconstruction building in the differential between the environmental demand and the full range of coping resources an individual is able to mobilize over time.

Finally, we should consider the question of exposure and its demographic components. Although differential exposure to life events and stressful life events does not account for the variance in outcome in the population as a whole (Thoits, 1982), certain demographic statuses are considered to be risky (Biegel, Naparstek and Kahn, 1980) or to mediate risk. For example, it has been argued that socioeconomic status does not automatically imply adequate or deficient coping resources or environmental demands, but is related to "locus of control" only (LaRocco, House and French, 1980). Locus of control, in turn, is strongly related to differential outcome under stress (Seligman and Maier, 1967; Thompson, 1984; Wheaton, 1982; Houston, BK 1973). The following demographic circumstances are thought to increase susceptibility to morbid consequences of stress:

Poverty (Brown, Brolchain and Harris, 1975; Brown and Harris, 1978; Fried, 1969; Antonovsky, 1982; Pearlin and Lieberman, 1977; Marmot and MacDowell, 1986)

Youth (Brown and Birley, 1968; Brown and Harris, 1978; Dekker and Webb, 1973; Eckenrode and Gore, 1981; Unlenhuth and Paykel, 1973)

Being unmarried (Brown and Birley, 1968; Brown and Harris, 1978; Kessler, 1979; Kessler and MacLeod, 1984; Berkman and Syme, 1979)

Being female (Brown and Birley, 1968; Brown and Harris, 1978; Pearlin and Lieberman, 1977; Kessler and MacLeod, 1984; Pearlin and Johnson, 1977)

Being female, pregnant and without social support (Barrera, 1983; Nuckolls et.al., 1972; Lieberman, 1982)

Being female, blue collar, unmarried, with children (Brown and Harris, 1978)

Blue Collar Employment (Marmot and McDowall, 1986)

Being Laid Off (Donahue, 1986)

Unemployment (Gore, 1978; Marmot and McDowall, 1986)

Being unhappy with one's work (Verbrugge and Madans, 1985)

Low social status (Dohrenwend and Dohrenwend, 1969; Kohn, 1972; Gove and Tudor, 1973)

Recently urbanized (Rin et. al., 1966)

Being member of an unaccepted ethnic group, regardless of income (Holmes, 1969)

Mental Illness (Vaillant, 1979; Antonovsky, 1979)

Unstable social environment (Bloom, Ascher and White, 1978; Caplan, 1974; Henderson, 1977; Horwitz, 1978; Rin et. al., 1966)

No significant social ties (Berkman and Syme, 1979; Antonovsky, 1979)

No social support from ties (Horwitz, 1977; Hammer et. al., 1978)

No radial ties (Hirsch, 1980; House, Robbins, Metzner, 1982; Kohn, 1972; Granovetter, 1978)

Isolation (Marshall 1956; Mandelbaum, 1952; Maier and Laudenslager, 1986)

Bereavement (Brown and Harris, 1978; Schleifer, McKegney and Stein, 1979)

These findings strongly recommend an investigation of the effects of the social environment, which we undertake next.

III
STRESS, COPING AND SOCIAL SUPPORT

Where does social support fit into this equation? We have seen evidence supporting the contribution of constitution, personality and demography to stress and risk. Social support has been proposed as another mediator in the interplay between risk and disease (Cassel, 1976). Literature speculating on the connection between the social fabric and individual well-being goes as far back as the ancient Greeks and first found its way into modern research with Durkheim (1956). Since that time and particularly in the last generation, the field has veritably exploded with studies. Excellent critical reviews are provided by Leavy (1980), Thoits (1982), and Wortman (1983). We will highlight some of the findings and problems presented by this literature and propose a working definition of social support for the present study.

Current studies on social support concentrate on the micro-social environment which consists of an individual's network or the network which is available to him through people in his network. A network consists of ordinally numbered "zones" of people ranging from intimate to loose ties. It has been estimated that a person's first order zone contains from 500 to 2000 people (Pool and Kochen, 1978). However, research on the supportive/protective features of the social environment first concentrated on the larger picture, the macro-social environment.

Durkheim's 'The Division of Labor in Society' (1902, 1967) presents the first typology of social bonding at the macro-level.

His focus is on the felicity of the relationship, or the "fit" between the individual and society. His inquiry encompasses both the protective and negative consequences of constraint and the extent to which complexity discourages utility. Although in conclusion he celebrates the organic solidarity which attends universal political liberation and the specialized interdependence which attends industrialization, it is this freedom which paradoxically opens the way to despair and thus generates and even necessitates "artificial" modes of social bonding. With the exception of altruistic suicide, there is no suicide in primitive societies, while the sad, not to speak of the anomic, suicide is endemic to civilization (246). The paradox inherent in the poor but temporarily stabilizing resistive strength of rigidity intrigues him, and his analysis ultimately performs one of the most delicate balancing acts in social theory. A brief discussion of these paradoxa will help in our own effort to compare structural conditions in which the choice among primary, peer group and professional support, or crisis intervention, is a good thing. And in concert with Durkheim's findings, we are prepared to find some structures in which everything is already thought out and filed away and in which active ritual and rationalization precede and render crises and crisis intervention superfluous, even in modern society (Wortman, 1983).

Durkheim juxtaposes societies characterized, on the one hand, by mechanical and, on the other, by organic solidarity. The former type is found in primitive groups in which religion

(159, 130) pervades life at the political, social and juridical level. The latter is described as consisting of "organized repressive sanction." This is a state of intense homogeneity in whose exercise of pervasive spiritual force that which is individual in the individual disappears. "Our personality vanishes." Not only is " all strong psychic individuality (absent)" but all the people seem even to LOOK the same. Not only do they resemble each other physically, but they resemble each other at every other level and are thoroughly "absorbed into the collective personality." (130) Social ties are consanguinous and the individual moves about in a totally controlled and restricted environment, his thoughts and activities prescribed and integrated into an established and incorruptible system. There is no place for initiative or reflection; the idea of crisis is literally unthinkable because all events are pre-interpreted, subject to ritualized integration processes, and pre-emptively conceived. It should be mentioned that Durkheim based his analysis upon descriptions provided by Maine and Waitz of 19th century Indonesian cultures, and that the anthropology may not be meritorious by 20th century standards. Allowing for ethnography that seems fairly arbitrary, as an ideal type this element in the typology is heuristically felicitous and even has some contemporary analogues.

In contrast, organic solidarity frees the individual from the protective womb, thus exposing him to unrationalized exigencies but also liberating him from stultifying homogeneity. Such a system "leaves open a part of the individual conscience." Life is more personal, more specialized, less certain, more

dependent upon individual initiative. Society is still a powerful force in life, but "the yoke we submit to is much less heavy" (131) in the repressive sense, and provides more space for free play. Sanctions are restitutive rather than repressive. Religion drops out of the penal code (a Christian innovation, in any case (169)). Rather than feeling acted upon, the individual is his own agent (169) and the source of his own initiative. His place in the social system is based upon achievement and activity rather than blood and family ties--his occupation, or the functions he fills, gives life meaning and places him into relation to others (180). Reflection is encouraged; change is progressive rather than disruptive; stability is considered unproductive, uncreative, regressive. Educational institutions are intellectually radical as well as conservative.

This social order may lose its own resistive force as "the ties which result...are not as profoundly affective of the heart as are those arising from consanguinity," (186) but they have the benefit of having been freely chosen--fragility is a desideratum rather than a detriment since the resulting flexibility entails elasticity, and, paradoxically, political resilience. In contrast, the fragility of repressive force is great--"what makes a social tie rigid is not what gives it resistive force." Stability acquired by virtue of repression is spurious, as its strength depends upon conditions which can be maintained only under specialized conditions--rigid social control, political and physical isolation, intense acculturation and stagnant intellection. Pressed for contemporary examples of such a

longevity of stable forms of Micronesian civilization (just since August of 1986 under intense re-examination) and the Tibetan Buddhists are excellent examples of cultures which are truly secluded from modernization. If both biology and psychology are culturally mediated, so, too, will be the universe of utility and experience available to each individual--but only if he remains unexposed or indisposed to exposure. Both the Amish and Hasidim experience and appear to tolerate multiple interfacing with mainstream American culture without significant attrition or enfeeblement of their own ways.

According to Durkheim, the security experienced in mechanical solidarity is spurious because it is based upon this gross restriction of the world. In organic solidarity, the situation is different. When the collective conscience leaves open a part of the individual conscience, the solidarity that ensues is based upon shared freedom and not shared repression, and "the more this region is extended, the stronger is the cohesion which results."(131) Something akin to the Spencerian free market--but there the connection with Spencer ends--in which social harmony is dependent upon a complex division of labor and mutual exchange in the absence of contract, occurs in organic solidarity. As with Adam Smith and Hobbes, harmony occurs by default. Since men are at liberty to pursue their own self interest, they will surely do so. The sum of all the individual self-interests will result in the common welfare. This is a spontanous, self-generated solidarity, whose adhesive is free exchange and free exchange only. Positive controls are parameters of exchange, cooperation and contract rather than

negative or repressive controls.

But for Durkheim, such harmony is as tenuous and spurious as the harmony experienced under conditions of repressive sanction/intellection. If life is truly a war of all against all, "any truce in this general antagonism is temporary." (204) Durkheim takes a Malthusian stance on the Spencerian notion that happiness increases automatically with productive power. He says that as technology advances and the division of labor becomes more complex and the struggle for existence more acute, there is more and better equipped competition for even more limited resources. On the other hand, there is something good about it--more specialization leads to greater interdependence and forces more points of contact. In 'Suicide' more points of contact = greater social density = potentially greater solidarity = potential individual serenity. Of course, points of contact between competitors are points of potential conflict. But points of conflict do not necessarily negate interdependence and obviate the possibility of solidarity--they can point up the criticality of cooperation and spontaneity (377-82). As the division of labor progresses, so does technology, so does liberty, and so, ironically, does solidarity.

In sum, in its ideal formulation, organic solidarity is predicated on freedom and resilient creative transformativity rather than on statis and homogeneity. Contrary to the predictions of Tarde, historical transformation will be continuous and dialectical rather than simply cyclical (294). In history, society will become ever more libertarian, apparently ensuring its own destruction in anarchy. But it will

continue to flourish as long as it adds freedom to order.

This freedom exists only in the context of society and in mutual relation to the social regulation which both checks and creates it. In both society and individuals, the relationship of freedom and constraint is a constant play of one against and for the other, constantly striking and breaking balance. Individual freedom is meaningful only in relationship to the freedom of every other member of society, to society as a whole, and to social responsibility. Society is the source of freedom and the source of constraint. Since the progress of history is ongoing, no balance that is struck will endure--freedom and regulation will collide, the social ethic will temporarily collapse, people will lose their freedom, their ethics, their solid base, and out of the ashes a new order, with freedom, will endure. At no time, however, in contemporary society, can the fit between the individual and the social order be taken for granted--despite all the freedom and creativity possible in an organically solid society, one thing that is irretrievably lost is the tranquillity.

For Durkheim, the contract that is struck between the individual and the group should be completely spontaneous. This is partly why a true contact can spring only from the division of labor. Here again, however, opposing forces are at work. While the spontaneous division of labor is a source of solidarity, contributes to the individual and society as a whole, and potentiates transformation in both, it is also true that "functional diversity induces a moral diversity that

nothing can prevent." While this may be the source of creativity and resilience and carry with it tremendous transformative power, the required spontaneity can disintegrate the social fabric. But only if cohesion is viewed as static. From the Hegelian point of view--no kin to Durkheim, but invoked here for heuristic purposes--all equilibria are fleeting. Societies may form, progress, regress, and disintegrate, planting the seeds of their own destruction and transformation at every stage in their history. Nothing is ever lost, nor does anything every spring into being ex nihilo. But while this is a happy view of the long sweep of history, Durkheim is concerned with the individual demoralization which often results from social transformation. It is not for nothing that the Chinese curse "may you live in an interesting time" is cryptic--it celebrates both stability and change while it recognizes the deep toll on the individual of too much of either. Times that are not very interesting do not produce questions; interesting times produce definitional and situational crises at the macro and micro level and force the restructuring of paradigms at every level.

Simmel also sees the moral and technological diversity inherent in the division of labor as a positive force which results in the formation of groups embedding the individual in society at many different levels. History has seen "the progress from a differentiation and combination according to external, schematic criteria to a differentiation and combination in terms of their real solidarity or affinity." Viewing the formation of groups in terms of substantive criteria

permits us to appreciate the positive binding capacity in the division of labor and its diverse applications. In this case, once again, symbiosis is not accidental or mechanical. Free rational group formation diversifies the social environment (and may also enhance or confound the individual's internal environment) and is the only feasible basis for solidarity based upon real organicity and not propinquity or accident as in primitive times. On the other hand, considerations of efficiency and productivity have given rise to bureaucracies based upon military models which subvert these ideals in favor of instrumental organization and action. "Modern techniques have succeeded in reaching more intellectual ends with more mechanical means, compared with the way of life of primitive periods, which was less roundabout, more uniform and more instinctive." (139) Modern means enhance cultural progress as a whole and the "internal coherence of a whole group" (195) but they may produce a coherence which embeds and submerges the individual. But all is not lost--solidarity and autonomy are available in multiple intersecting circles. The paradoxical nature and the contradictory tone of the whole enterprise are considered positive and transformative.

George Herbert Mead develops the themes of ambivalence and mutuality. Individual experience is not only preeminently social, but cannot even exist in the absence of shared meaning. Far from being a repressive force on the individual, society alone permits consciousness and individuation, for it alone brings order into chaos and givesn the individual the cognitive

means by which he identifies himself and the world he encounters. "...social control, so far from tending to crush out the individual or to obliterate his self-conscious individuality, is, on the contrary, actually constitutive of and inextricably associated with that individuality; for the individual is what he is, as a conscious and individual personality, just in as far as he is a member of society, involved in the social process of experience and activity and thereby socially controlled in his conduct." (255)

Nothing can be commenced outside of institutions which have antecedent paradigms and define situations and delimit cognitive, emotional and organizational responses to them (261). Individual action is only a reflection of the institutionalized systems of society; individuality is not subverted but only made possible within the context of institutions which delimit conduct and cognition (262). Individuals, of course, are the architects of their own institutions. However, the seeds of the progress they plant may not bear fruit in their own times, and any society in the process of transformation cannot provide much quiescent ground to stand on. Individuals in such societies have designed this turbulence themselves and thus presumably the ways to cope with it. Even so, when institutions and ideas are changing, dying and being born anew, paradigms are thrown into doubt and people no longer know what things mean, what to do about them, and whence they will lead. Life on the razor's edge is risky, and even the architects and heroes have to cling steadfastly to whatever is true and constant in their nature, and adapt as necessary, or despair.

For Mead, society is progressing toward that ideal in which the response of the individual spontaneously mirrors the behavior of the Good Samaritan (274-5). This kind of spontaneous sympathy is an end in itself and "involves the successful completion of the social process" which is the integration of each man with his brother. But helping others is a complicated undertaking. "Fruitful assistance has to be intelligent assistance" which is appropriate to the situation and beneficial to both parties (275). In modern society the group and the individual achieve a congenial balance in which creativity and individuation are possible, whereas in primitive societies on is "predetermined," with individuality being constituted "by the more or less perfect achievement of a given social type" (221). The essence of the self is cognitive and involves the structured interplay of significant symbols which are taught, produced and transformed by social context.

In one sense the individual has to fight his social context--particularly his primary group--for his very individuality not to speak of his freedom. However, his sense of independence and freedom, and everything else in the world, is derived from shared meanings and is realized only within a social context. On the one hand, he struggles to pull himself out of the embeddedness which threatens to suffocate, and, on the other, he continually seeks out the comfort, company and inspiration of others. He makes revolutions and formalizes them with rules the next generation will break. He creates institutions to promulgate agreements and to solve problems, and

they create agreements and problems with lives of their own. The dialectic is continuous and transformational and occurs at every level of formal and informal life.

For Durkheim, who is the father of this whole body of sociological thought, what is sacred, in the end, is the group. If sacerdotal meaning was once ascribed to that which was immutable, or given, and the group sustains what is sacred, even if it is no longer sacred in the precisely religious sense--the group itself takes on that eternal character. This means that even in the midst of its own transformation and even when its paradigms are being called into question (that is, even in "interesting" times), the group is the vessel of the sacred, whatever it is, and however it is changing and thus the system of last resort. It may be the sacred itself. The group, or the idea of community will, if necessary, supplant the religious when the latter no longer pervades social life, and when ritual can no longer obviate or mend the catastrophic. We think that the fervor with which sociology and popular wisdom embrace social support is explained in part by this.

The problem is: for Durkheim, solidarity works only when institutionalized; but institutions tend to subvert themselves. Hegel says that, once formalized, institutions "forget" the reasons for their establishment and begin to concentrate on structure and survival. Their founding spirits become crushed by their rules. But the rules are not completely dysfunctional--they ensure the survival of the structure they regulate, and the structure is the formal appearance of the idea which inspired it. The dilemma of moving from the ad hoc to the

structured involves a loss of spirit and spontaneity but also of capriciousness and fragility. We argue later that the social support groups formed "naturally" by victims of all sorts provide the same legitimation and validation of their experience as did religious forms in traditional societies and thus serve as latent pattern maintenance.

There is however, more to it than this. This body of 19th century theory on social bonding in institutional and historical forms becomes an intellectual substrate for theory and studies on bonding by individuals to other individuals and the generation of networks at the macro- and micro-social level. Moreover, classical theory holds that there is a two-layered, interactive deep structure to social bonding. The structure is bound to history because the macro-social relations produce definable historical forms, and these forms pervade individual choices and vice versa. We argue that there is also deep structure in individual bonds because there are duality and conflict in any kind of connection. The act of connection obviates isolation and creates opportunity for conflict and resolution. Whatever social bonding comes from, and whatever struggles inform it, it is about reconciliation in the first and last instance. It is the reconciliation of fear and ignorance with integration; about the reconciliation of man with man and of man with what is best in himself.

Thus people make bonds which diminish their autonomy but since they establish them as social agents the bonds are necessary conditions of their humanity. Bonds, far from

shackling the individual, free him. They generate autonomy because they establish him as a social creature. Without social life autonomy could not even be imagined.

Moreover, at some level the act of bonding goes deeper than utility (which is where contemporary studies appear to be stuck). Bonding is not only felicitous, it is ontogenetic. It takes us out of ourselves as pure subjects, and makes us meet the world around us. We are not human until we make some kind of cognitive connection with some Other. When we are taken out of ourselves as pure subjects, we are diminished, upheaved, transformed. Whether we know it or not, thinking, acting and bonding will always arouse our ambivalence, because they will always remind us of what we have lost--the primordial paradise in which we did not think or act and were absolutely bonded to the world which begot us. As with cognition, we engage in bonding only because we "have" to--because we are human and must go out of ourselves to be and know ourselves. Our birth un-bonds us, and we spend the rest of our lives recapturing and transforming that first bond--recapturing it because we move to be embedded in other people, transforming it because this time our embeddedness is chosen and conscious. Bonding and cognition as human acts "mark" the loss of primal integration, and by the same token they also constitute the tools which we have to "reclaim" it. Of course we cannot really do so, and we wouldn't want to be able to reclaim it completely, because we can know and think. This is why Milton calls original sin, which is an epistemological and not a moral event, the felis culpa. It is a happy fall from grace, because in grace we were not ourselves,

and in sin, we are free, human and conscious. The loss of our bond to God can be felicitous because it is the loss of our non-knowingness--an awesome gift.

The classicists concentrated upon choices made at the macro-social level, possibly because in classical times (whatever they are) the sacred was dominant and large-scale social reality permeated personality. In any case, they were trying to explain the Reformation. In contrast to sacred times, in modern life the stress is on rationality, individual volition and individual responsibility. Modern times are probably more dialectical than sacred times, since choices are made more freely at the individual level--and since, from the individual's point of view, responsibility is almost wholly individual--and these impact upon upon macro-social phenomena, at least at the community level--while macro-social level choices and agreements impact less penetratingly upon individual freedom--at least in western democracies. Social bonding involves simultaneous passivity and activity. (1) This causes problems in contemporary research--is social support a dependent or an independent variable? (2) Whatever it is, the value of reciprocity seems undisputed because self-esteem suffers (from disproportionate greatness or smallness) in the absence of symmetry--it is important to give and to get social support--and not necesssarily from or to the same people. Deep structure might invoke a notion of balanced mental health predicated upon the successful, but always fleeting resolution of the relationship between autonomy and dependence.

We now return to current research on social support at this level, bearing in mind that bonding, networking and social support are not the same thing and that the efforts of the classicists to integrate deep structure with historical movement and psychology go largely unappreciated in contemporary literature. What is social support? It is "support...through societal ties" (Lin, Simeon, Ensel and Kuo, 1979). It is seen variously as resource, buffer, mediator, protector, and nullifier of adversity. Some research grants that it is pleasant but finds a null effect. What social support is is argued hotly. What it does, and whether it works, and whether it is the cause of something or the result of something are very important questions to which we propose to contribute some answers in the following pages.

What is social support? One problem is that social support, social resources, social integration, social networks, natural support systems and other terms have been used to mean the same thing (Thoits, 1982) when in fact they do not. Nevertheless, we can say that social support is a complex phenomenon integrating positive affect (including affection), affirmation, appraisal, information, aid and other things that people do to and for each other to enhance their well-being or help solve a problem (Kahn and Antonucci, 1980; House, 1981). Social support is delivered both by society at large, in terms of its norms and values, its expectations, and the opportunities which it provides(the "classic" position), and by the micro-social environment comprising individual networks. Among other things, support tells us that we are cared for, valued and

esteemed (Kahn and Antonucci, 1980); it gives us advice and lends us a hand when we need it (House, 1981), it provides us with role-models and reflective mirrors (Crowne and Marlowe, 1965), and it gives us advice (Caplan, 1986).

Support gives us a sense of belonging and attachment to others. It aids us in appraising our own actions (Cassel, 1976). It can provide us with goods and services (Thoits, 1982), emotional sustenance (1978), information (Cobb, 1976; House, 1981), guidance and feedback (Caplan, 1974, 1981) and constructive criticism (House, 1981). It is possible to pare all this down not only to six "A's" (affect, affiliation, affirmation, etc.) but to one thing--information (Cobb, 1976)--(1) information that we are loved and esteemed and that help is available if we need it and (2) the information which we need to effectively manage our lives--what company is hiring, what doctor do you recommend?, etc.

This information validates us as human beings and aids us in making decisions and taking control of our lives. It is said to be effective in obviating or ameliorating stress generated by such diverse events as job strain (La Rocco, House and French, 1982), unemployment (LaRocco, House and French, 1982), complications of pregnancy (Barerra, 1978; Nuckolls et.al., 1972), academic pressure (Caplan, 1986), terminal illness (Lowenthal and Haven, 1968; Bunch, 1972; Miller and Ingham, 1976; Conner et.al., 1979), bereavement (Walker, MacBride and Vachon, 1980), physical frailty associated with age (Sullivan, 1986) firebombing (Titmuss, 1950), barrage (Marshall, 1952) and

combat-related Post-Traumatic Stress Disorder (Kadushin, 1983). Social support makes us feel good about ourselves and about things in general, and feeling good is associated with longevity (Antonovsky, 1972; Berkman and Syme, 1979).

Some investigators have found a null effect. Pinneau (1975, 1976) was probably the first to question the buffer hypothesis. He reanalyzed data from Caplan et. al. (1975) on the relationship between job stress and health and the role of social support in buffering job stress. He found that support, especially from supervisors, decreased depression and (stressful) role ambiguity/conflict but was not associated with outcomes showing more psychosocial strains than would have been found by chance. In 1978 House and Wells found that supervisors, not wives and friends, provided the only support significantly associated with good health and concluded that the association of stresses, strains and life events reflects stable differences between individuals in exposure to stressful life events and health status.

Another interpretation is suggested. It is possible that the source of support is a salient variable--supervisors helped because they were empowered to affect that specific situation, just as the father of the child said to be the only actor significantly associated with support during pregnancy (Nuckolls et al., 1972). Just as there are diffuse kinds of support and variant situations and personalities which may be amenable to support, there are many different sources of support. Which sources provide the best quality, the most pervasive, the most effective, the least demanding, etc. kind of support is the

subject of considerable research (Caplan, 1986; Wethington and Kessler, 1986) on purportedly widely variant efficacy (Bankoff, 1981; Hirsch, 1980). Sources of support in the micro-social environment will be people known to the focal individual or at least connected to him through someone else. Married people receive most of their support from their spouse (Lopata, 1969). However, when people are questioned about specific past or hypothetical situations, a variety of sources is mentioned, from spouse, siblings, other relatives and close friends to colleagues, superiors, service professionals (hairdressers and barbers) and doctors, people who are in the business--psychotherapists, social workers, mothers, ministers, etc. The full set of these people comprises a support network which radiates out from a center of intimates and ultimately includes all those with whom there is contact or even potential contact.

Different sources will be called upon and be capable of delivering different kinds and degrees of support, depending on structural and mechanical (ease of access, speed of mobilization) features of the network (hirsch, 1980) and on the focal personality (Kobasa & Puccetti, 1983), who has always been been the ultimate arbiter in support research--the "success" of support is nearly always measured as the extent to which (variant) individual needs for love, attachment, affirmation and mutuality are met through interactions with others (Caplan et. al., 1976). Different focal personalities will need different amounts of support, and the same people will need different amounts at different times and in different circumstances. And

one's support network may be different from an ordinary network, in that not all members of the network can necessarily be depended on to deliver support. The support network consists of the people one feels he can rely on for help, information, advice, affection, etc., when and if he needs it. In modern society, such networks are in a constant state of flux at any given time and over the life course (Kahn and Antonucci, 1980). Networks are described by their (1) mechanical and (2) structural features.

Mechanical measures gauge the real delivery of support in the interpersonal transactions. Is the support truly available when I need it? Is it enough? How quickly can it be mobilized? Is there any reciprocity (symmetry)--this diminishes self-esteem problems. These questions are put to people who are asked to imagine themselves in a past or hypothetical situation and to specify who in their life has been or could be depended upon to help out.

Structural investigations take a slightly different tack, concentrating on characteristics of the social unit--family, work group, other significant connections--rather than the actual exchanges between members of these groups. Both good structure and good mechanics (delivery) are, among other things, purported to:

(1) account for the variance (both ways) in exposure to stress (Holmes, 1967; Tillman and Hobbs, 1949; Pattison, Lamas and Hurd, 1979; Shinn, Lehman and Wong, 1984). This is a purported DIRECT or COUNTERACTIVE effect.

(2) protect the individual from the morbid consequences of exposure to stress (Cohen and Wills, 1985; Kessler and MacLeod, 1985). This is a BUFFERING effect.

(3) ameliorate any morbid consequences should they occur (Kadushin, 1983). The MEDIATIVE effect.

Exactly how this works is not known. Neither can we say for certain what elements are necessary for a viable support system. These investigators have concentrated on describing the structural characteristics of networks in an effort to recognize problem structures and to intervene in the hope of reducing risk.

For example, network density has been thought to promote cohesion and stability. Taking pre-industrial society as a community health model (the gemeinschaft of mechanical solidarity), some network theorists proposed that the most highly supportive networks would be close-knit, share norms, values and goals, and not too big or too small so that collective identity can be intense but not too diffuse. Everyone should know and have frequent contact with the focal person and everyone else so that news travels fast and help can be mobilized immediately. With a setup like this, the community lost in the social disintegration and demoralization which followed in the wake of industrialization and urbanization would be "found" and modern alienation confounded (Wellman, 1979). There would be mutual, dynamic benefit for the unit and the individual. The German army knew about this as early as World War I (Shils and Janowitz, 1950), there is evidence that Napoleon understood group solidarity, and today combat units are organized on this very model in armies of all types in all kinds of cultures (Mandelbaum, 1952; Marshall, 1952). Other theorists have proposed that such networks might provide

excellent affectional support but may be too limited to help in other instances in which people need help, where as extensive, looser networks are useful in finding jobs and getting new ideas. Some research even suggests that small dense networks may speed the development of mental illness in susceptible persons (Pattison et. al., 1979) when transactions are negative and there are no radial connections. Intimates have also been found to be counterproductive to women newly divorced or separated and trying to get support for a first job or return to school. In addition, high density non-radial networks can smother individuals with too much support (Hirsch, 1979; Wellman, 1979), possibly encouraging dependence and involution, and diminish his chances of exposure to new people, norms, ideas and opportunities--all the problems Durkheim attributed to mechanical solidarity.

Even though low-density network members might never learn if a fellow member needed help, low-density networks have the advantage of being less emotionally demanding (Caplan, 1986) and providing more ex-tensive opportunities "Radial networks (are) more flexible...more adaptive to the demands of a modern industrial society that is undergoing continuous social change" (Laumann, 1973). One's close circle has already shared everything it knows--to make new connections, get new information and new ideas, one has to make new contacts with people at the fringe of his network and then one step out of the fringe.

Widows and middle-aged women re-entering school or the workplace received negative support--"stay home!"--from close

knit family and old friends in one study (Hirsch, 1979) but plenty of positive reinforcement and encouragement from new ties. Students preparing for examinations have found primary circle pressure stressful (Hirsch, 1979; Caplan, 1986), while similar pressure from friends and roommates was seen as encouragement and competitive inspiration. High-density networks have also been linked to schizophrenia (Kohn, 1972). On the other hand, strong, dense primary groups have been linked to survival and well-being under terrible conditions such as combat (Shils and Janowitz, 1950; Marshall, 1952; Mandelbaum, 1952), concentration camps (Eitinger, 1964), natural disasters (Green, 1982; Erikson, 1974), and continuous firebombing (Titmuss, 1950). Much of the research on the differential effects of various structures has been carried out in the hope that if salutory structural features can be isolated, risky existing structures can be recognized and altered--or at least encouraged--to enhance positive outcomes. Most studies indicate that structural features are not as informative as had been hoped (Kadushin, 1983). Density, centrality, and other structural indicators tell us nothing about the supportive nature of the actual transactions that take place among network members. Neither do they tell us which stresses are most susceptible to counteractive or buffering effect, and which are impervious to social support. What types and sources of support are most effective in producing what kinds of desired effects in what situations? (House and Wells, 1984; LaRocco, House and French, 1980). For answers to these questions, a mechanical or

dynamic approach was indicated, and it was decided to interview the "consumer"--the one who receives, processes, evaluates and benefits from the supportive actions of his connections.

There seem to be as many instruments as there are investigators studying social support and stress/support conditions being studied. Most instruments have made some effort to assess global support while relating it to a specific situation under study. There have been two central problems--one having to do with a timing problem that probably has produced large numbers of false negatives, the other the problem of subjective attribution. Most critics believe that the reliability/neuroticism of the self-reporting respondent hopelessly confounds the effort to draw a true picture of his needs for and reception of the supportive efforts of others, which he may over-solicit, over-use, not return, under-value, and a host of other confounding things. There is strong evidence that people who are sick associate their illness with precedent events, that people with deficits in social bonding feel unsupported, and that reporting and attribution vary widely within and across cultures (Schroeder and Costa, 1984; Mechanic, 1974; Henderson, 1970). This is a problem with any social research that asks the respondent for a description of the situation--and whether his description is accurate or not is immaterial (Cobb, 1976; Lynch, 1977) since it is perceived not actual support which is associated with well-being (Wethington and Kessler, 1986) and it is his perception in which we are interested.

The second problem is more serious. Most instruments to

date have measured support in a variety of situations by asking the respondent to reveal how many times in the last month someone helped him out with the situation (e.g., Zautra, 1984). Such studies invite false negatives from persons who are independent copers who will "underreport" their support resources because they are healthy, nonneurotic, self-sufficient, etc. (Mechanic, 1974). Studies suggest that although the magnitude of symptoms is the best predictor for seeking medical care, it explains only a small part of the variance in formal help-seeking behavior, and that mentally and physically healthy people ignore or self-treat common illnesses rather than presenting a complaint to a physician (Kessel and Shepard, 1965). A similar situation might exist if one asked an elderly widow how many times she asked a friend last month for a ride to the doctor or to the grocer.
If she didn't need one, she would have answered no. What if she had needed one, would there have been somebody there to help her out? Who? These are the salient questions, because they give a picture of support resources which is uncontaminated by variant utilization. If the investigator is interested, he could then ask "have you ever asked this person to do this for you? And how has it worked out?" Our instrument follows the lead of Wethington and Kessler (1986) in gauging support resources for hypothetical situations.

Perceived availability of support is the only kind of support which has been shown to be a reliable predictor of positive outcome (Kessler and MacLeod, 1985). Utilization is a

better indicator not necessarily of need, but of dependence or demoralization, of personality rather than situational variables (Dohrenwend, Shrout, Egri and Mendelsohn, 1982). The variance in inability of a person to meet the demands placed upon him by his environment or predicament is explained better by individual than situational variables (Biegel, Naparstek and Kahn, 1980). Perceived support can be measured for a variety of hypothetical situations as the feeling that it would be available if needed (Sarason et. al., 1983), a method which eliminates false negatives but not all methodological problems. These include:

(1) People reporting high perceived support may be those disposed to solicit or generate it because:

   (a) they are more attractive--they rebound easily so people are happy to help them out. The help clearly works, and the helpers do not become discouraged or disheartened;

   (b) they are less self-sufficient and more dependent upon others to confront problems;

   (c) they have an extensive network to mobilize and do not risk exhausting one source;

(2) the perception alone might cause a more favorable or positive approach to a hypothetical situation. But if the perception is unfounded and utilization attempted, the appraisal is found to lack validity, and this disappointment may further complicate the picture;

(3) the effect of perceived presence or absence of support might be spurious if it is erroneous;

(4) one of the first signs of personality disorder is deficient social bonding, probably expressed as absent social support--the question is, is it the chicken or the egg?

(5) perceived support could be construed as a function of locus of control, in which case "false" negatives and positives would be more indicative of personality than the "real" case (which we are not interested in anyway).

We still do not know exactly how the actual/hypothetical transactions help and under what situations what supports are

most felicitous. We do know that stress is not explained by the stimulus but by the response, but in the sense that the stimulus is the source of the magnitude of demand, and the response the capacity of the individual to mobilize resources to meet the demand, the extent of the resources could have a powerful effect on the effect of the stimulus. Controlled situation-specific experiments might illuminate this connection.

In addition, little of the literature considers the interaction of social support with personality variables, including the range of normal personalities and personality disorders--i.e., the people who are most attractive to support probably need it the least, and unattractive people are not supported because they are unattractive, or perhaps are unattractive because they don't get enough support (Henderson, 1980). The question focusses on whether social support is an independent or dependent variable. We believe that it should be viewed as a dependent and/or mediating variable and that this stand is not really at variance with some of the most recent literature which has begun to explore the interactive effects of social support and personality and to examine social support as a consequence of social skills and other personality factors and the utilization of support as the result of a hardy outlook on oneself, the environment and the meaning and source of events (Kobasa, 1979). Until recently, social support was used almost exclusively in the former capacity to generate or predict some outcome--and it was used alone. But numerous critics have pointed out that social deficits are practically pathognomonic

of personality disorder, thus hopelessly confusing the paradigm. One moves through the literature with a feeling that when all is said and done the basic hypothesis has survived bloodied but unbowed and that affection, affirmation, and information are positive things in life. But we believe that their etiological place has been misconstrued. We think that our research will suggest that social support is the active achievement of each individual and not something which can be thought of as a "given," independent variable, and that it is dependent upon personality and to a certain extent circumstantial factors. Since personality has a social origin, we will advance this view as precisely as possible: (1) social support--affection, affirmation, information, etc.--is a variable which interacts both as cause and consequence with other variables, most notably personality. Personality largely determines not only one's need for social support but the actual social support that is available to him. Circumstance, especially traumatic events, plays an immediate role; but the variance in outcome suggests that individual volition and disposition are the best predictors. The Locus of Control literature (see Wheaton, 1983) suggests that while locus of control is a personality attribute it also varies according to circumstance. That is, in accord with our discussion of the objective nature of stressors, there are some situations which can be expected to remove the strongest internal controls, thus depriving the internally centered individual of his sense that he is his own agent. Torture is undertaken to do just that. Veterans speak of their "thousand-mile stare" and the passivity that attends long tours

of combat duty. Victims of the Buffalo Creek flood spoke of their relatives' "never being the same again." There is some doubt about whether core personality can be shattered. Instead, we would like to formulate the control/locus of control issue as follows: there are situations which remove control from the individual; individuals respond to such situations variably, depending on circumstances and upon personal assets, including personality assets. The present study was developed as a test of the effect of formal support on outcome, but, as we reported in the introduction, there were several alternative hypotheses, and one locus of control question was inserted almost as an afterthought. As data analysis progressed, this afterthought became a discriminant variable!

(2) the sources of social support can be unconventional and will be contrived by people in circumstances in which standard support resources are unavailable. One hundred years ago the great epidemiologist Sir William Osler noted that while strong primary bonding to an equally powerfully bonded significant other was the best protection against syphilis (1889) and a host of other somatic and spiritual disorders, it was too much to expect that everyone would have the good fortune to have the opportunity to achieve such deep gratification. Osler suggested that gratification could be attained through other commitments, especially cathexis at work and in friendship, and that these constitute effective substitutes for lifelong primary significant other(s) which deliver those nonspecific pervasively positive (Kessler and MacLeod, 1985)

effects. Modern individuals are more likely NOT to have the chance to connect with such a circle or individual because in conditions of organic solidarity people are wholly free to make their own bonds and also free to fail to make them--something totally unthinkable in mechanical solidarity. Some of these people will bond in other settings which maintain latent patterns but transform them into forms quite different from those manifested in mechanical solidarity. The present research contains examples of this. The social supports achieved by the sample about to be described constitute a kind of achieved extended family of multiple intersecting circles circumscribing multiplex identity and radial networking.

BEREAVEMENT, SOCIAL SUPPORT and THE SELF-HELP GROUP AS LATENT PATTERN MAINTENANCE and THEATER OF RE-ENGAGEMENT

Bereavement elicits numerous inappropriate social support efforts (Walker, MacBride, and Vachon, 1977; Parkes, 1964) and is unique in that it automatically and unequivocally removes the key confidant (Lieberman, 1982). It is socially dis-engaging (and therefore inductive of psychological vulnerability) on two levels--it removes both the primary bond and one's social identity. Grief work takes place on two levels--more about this later--and re-engagement is one of them. Re-engagement is accomplished over time through resuming multiple roles/complex identity and renetworking one's life. Renetworking achieves new or renews old sources of validation, support, companionship, affection, information, etc.

THE SUPPORT GROUP AND THE PURPORTED PRIMACY OF THE PRIMARY GROUP

"When faced with the dual coping challenges of regulating my emotions and instrumentally addressing the demnds imposed by the stressor my well-being hinges on the supportive provisions I can actually wrest from my primary network" (Gottlieb, 1984). Support from one's spouse (Lopata, 1975) and parents (Titmuss, 1950) appears to have a critical positive effect in some traumatic situations. Combat hardiness is enhanced by strong primary group solidarity (Marshall, 1952). This disputed but thought to be the result of pervasive (Kessler and MacLeod, 1984; House, 1981) emotional sustenance (Gottlieb, 1981). Marriage is consistently implicated in good mental and physical health (Gove, 1972; Gove and Tudor, 1973; House et. al., 1972; Berkman and Syme, 1974).

But other "evidence suggests that the contributions of social supports are related primarily to the domain in which they are given" (Shinn, Lehman and Wong, 1984). Investigators have implicated high density primary circles as limited in information (Granovetter, 1975; Wellman, 1978; Hirsch, 1979), norms and values (Pattison et. al., 1979; Kohn, 1972), flexibility (Hirsch, 1979; Brown, 1978) and resilience (Epstein, 1961). In addition, nonsymmetrical social support undermines freedom and esteem by cultivating dependence (Caplan, 1979) and the ambivalence of others (Coates and Wortman, 1977). Primary group support has been shown to be immaterial in job stress due to role conflict/ambiguity (Caplan, 1971; House and Wells, 1978; French et. al., 1974; La Rocco, House and French, 1980; Caplan, 1972) where supervisor and colleague support did

help, lending credence to the view that the best support comes from somebody who is actually empowered to help you (LaRocco, House and French, 1980; Lieberman, 1982; Sullivan, 1986). And well-knit high-income families belonging to ethnic groups unaccepted in their communities have shown higher levels of accidents (Tillman and Hobbs, 1949; suicide (Holmes, 1961), schizophrenia (Dunham, 1961) and upper respiratory infection (Holmes, 1967) than members of non-marginal groups. Primary bonds can deliver love and esteem which are impervious to external adversity, but they cannot get you a job (unless your father is the president of the bank), set your broken leg or defend you in court. Social scientists may just be discovering it, but people have naturally developed "convoys over the life course" as domain-specific support networks which are built by them in response to the needs and demands of their own self-generated development. Only one convoy is given--the family of birth. Needless to say, its effects are long-lived and at least partially determinative, and if social support were ever an independent variable, it would be here. Subsequent convoys are networked into being by people as they literally create their social life. Networks are built for their own sake--that is, for apparently non-instrumental reasons--and also in response to "stressor-potential" situations which social support is purported to alleviate.

Self-help groups are convoys created in response to specific stressors believed to be amenable to relief by social support--mostly perception and emotion-focussed support. The mutual support delivered in group interaction provides (1)

validation of the person's felt affect and (2) information that others have similar feelings and are coping in various ways. One advantage of self-help is that it eliminates or ameliorates the effects of the absence of support or well-intentioned but inappropriate support, particularly that which attempts to stem the flow of grief (Walker, Macbride and Vachon, 1977). In addition to the beneficial effects of role modelling (Caplan, 1979; Crowne and Marlowe, 1966), members receive a sense of empowerment (Riessman, 1985) from the examples of effective coping by others and the knowledge that they are independently helping themselves rather than relying upon professional services. There is further evidence that two or twenty heads are better than one both in the social validation and in the problem-solving process which requires multiple levels of social and personal attention (Gartner, 1985; House, 1984).

Stressor-specific mutual support is effective when it encourages re-engagement (Lieberman, 1982) and the rebuilding of networks. Families are limited in their ability to embrace new norms for people attempting to carve out new social identities (Brown and Harris, 1978; Hirsch, 1979). Mutual support of the stigmatized, however, can encourage involution (Kadushin, 1983) and professional victimization. It can also cause dependence and eliminate the impetus to multiple radial netwoking, ultimately exhausting any real support members can give each other (House, 1984 (ISR news)).

We might look at support group membership from the "classic" point of view. Few contemporary individuals

experience the complete embeddedness provided by traditional norms and traditional social structures. On the other hand, most modern people have a primary or primary-type circle but they also have multiple radial circles. This probably contributes to their mental health rather than hurts it, and certainly it contributes to the expanse of information they receive. If these circles provide affirmation and validation as well as information, etc., the old-fashioned community is no longer in need of saving (Wellman, 1979) since it has already been transformed in accordance with the needs and technological possibilities generated by industrialization's shrinking of the world and simultaneously expanding it via advances in mobility and communication, and the assured meeting of survival needs.

Do specialized circles replace or complement the apparently residual but not extinct primary circle for widows? Our study will show that both group members and controls have strong networks of kinship and close friends, and that the death of their husband did not, for most, succeed in completely destroying their social ties or their social will. For most, significant networks shifted somewhat from networks which revolved around their life with their husband, to networks appropriate to a new life. For women without children, it involved adjusting to living alone--a wrenching change, but one which after several years most subjects said they now enjoyed. Recent evidence suggests that people who live alone are no more and probably considerably less socially isolated than people with dense primary networks since the former are better radial networkers (Alwin and Converse, 1984), echoing Osler's point

that "there appear to be many healthy levels of social integration." A number of subjects reported being even more sociable since their husband's death.

We think that group membership represents both an effective problem-solving oriented coping process and a pretext for social activity. Group membership represents "natural" community organizing and latent pattern maintenance specific to the the demands made on individuals by modern industrial culture. "Active copers" in the control group will be seen to establish the networks they need on a less formal basis--and this distinguishes them from their member counterparts--reporting, for the most part, that their personal disposition had precluded group participation. We believe that although group membership is a form of active coping, active coping does not have to be--but often is, given the massive social transitions a widow has to undergo--coping that one of whose central features is the establishment of a new network.

SUMMARY

Most of the studies that we have reviewed demonstrate or imply a positive relation between the affirmation and inspiration we get from our social ties and good mental health. Popular wisdom bears this out--love and affection make us feel good in general and better about things we don't feel very good about. That dense, nonradial, rigid, highly routinized, and demanding primary environments have been implicated in susceptibility to physiological (Kaplan, Kasl and Niederman, 1974) as well as mental illness (Kohn, 1972; Hammer, 1981), not

just any ties will do (Berkman and Syme, 1979; Segal, Weiss and Sokol, 1965)--only positive ties deliver real protection, and it appears that their effectiveness is at least partially determined by their domain specificity.

Without appearing, for the most part, to acknowledge the connection, these investigators have been asking the same question that Durkheim did--what is it about the social environment that can protect us from mental disaster? We want to emphasize that the social environment is the human ground we stand on, without which mental disaster could not even be imagined, and is neither static nor given but is created by us by our continuous interaction with it. To the extent that it nourishes us during development it forms the social substrate of personality as it literally teaches us how to be social. Most of our immediate social environment, however, is made by us rather than simply given, even at the community level. Society at large is so large that its effects are limited to norm and value validation--very important and very diffuse--and the salient environment for the nonmarginal individual is the one which he builds around himself and is a reflection of his interests, desires, talents, and character. Some of the networks in this environment will be convoys he has called up to escort him through a life stage or event during which his needs for affirmation and information will be met by highly specialized circles. This is nothing unusual--people network all the time, and not always for apparently instrumental reasons. So if an individual joins a support group he is simply gathering another community about him to address an issue which is

amenable to social mediation. It is reasonable that in every piece of social support research, outcome is measured not in terms of the group (in the US, disintegration is part of progress in any case) but in terms of individual health, since social support is ultimately his own achievement and subject to his own judgment. Much of this literature, especially structural studies, was animated by the desire to isolate good structure and change bad structure so that individuals would benefit. We are not saying that structure is superfluous but that good structure is produced by individuals, and that if any social policy were to come out of these findings, it would be social policy that supported parents and teachers in their encouragement of ingenious mutual bonding and the development of personality traits like operative coping and good networking.

We will also show that an internal locus of control inspires social support. We contend that social support is a dependent rather than an independent variable since support is an achieved personal asset which is constantly in a state of transformation. It is also affected by income, education, and affirmation and encouragement at home during personality development probably encourage good coping by expanding the universe of alternative interpretations and approaches to problems--in addition to probably seriously limiting the number of problems.

We have examined some of the hypotheses considered in the social support literature. We argue that social support is an outcome rather than an etiologic variable. It (1) takes various

forms, none of which is necessarily more effective than others. (2) It is predicted on the one hand by some demographic variables, education and employment, both of which open opportunities for networking and effective problem solving, self-sufficiency, and cathexis, and on the other by personality type--hardy, independent copers are in better mental and physical health than people who feel buffeted about by external forces. We will show that group membership is one manifestation of internal locus of control-- it represents an active, problem-solving approach to the needs for information and validation generated by bereavement. Group members may either have natural circles that cannot meet these needs or recognize that natural circles are less well equipped than experientially credentialled circles to deliver emotional legitimacy and share relevant practical information and experience. Group members' cognitive appraisal of their situation and their needs and their active response will vary from those of controls. Group members probably join groups as part of their networking style. Controls with internal LOC probably have both intimate and radial networks and consider their supportive resources adequate to help them with their grief work and re-engagement. Group members with external LOC are probably socially dependent types--and therefore probably do not form mutually supportive but rather one-sided bonds. Controls with external LOC probably suffer from fatalism. This, too, would suggest that personality is a precedent of social support. While we will not describe the role of social support in the development of personality characteristics including internal LOC, hardiness, and others

that make for good coping, we will discuss each of these issues in Part II, in which we present the findings of this study.

Study Results and Discussion

METHODS AND INSTRUMENTATION. The sample consisted of 152 widows, 116 of whom were active members or recent "graduates" of two hospital support groups and the remainder of whom served as controls. Obtaining permission to select controls from community residents through official channels was not possible, so access was gained to county clerk's records through a personal favor--which could not be repeated. Every fifth male name was recorded, and every medium short of a private investigator--including repeated telephone calls and postcards--was tried in an affort to locate survivors. Some children were contacted and reported that some of the widows had died and others had relocated; for many others there was no trace at all. Even the hospital social workers had lost contact with them. This was a particularly dismal beginning which probably could have been avoided had there been a way to obtain official permission to sample and re-sample the death records and more ingenious methods of tracking people down.

All 152 respondents underwent the personal interview discussed in the last section and reproduced in the Appendix. When the interviewing phase of the study was about two-thirds complete, two further editions of the instrument were produced, one which could be used for telephone interviews, and one for self-administration. Three interviews were attempted by telephone--and completed in person. 27 respondents agreed to receive a mailed questionnaire. However, none of them returned it after four months. 24 of these interviews were subsequently conducted in

person; 3 people ultimately declined to participate.

Answers to the questions generated an empirical data base consisting of 117 dichotomous and continuous variables. The interviews lasted from 1 1/2 to 5 hours (mean length 2:52) and elicited information about their bereavement, people who delivered support during the acute stage, people who could be counted on to help now, their health, their current mental health, and personal information such as age, education, income, employment and children. In addition, subjects were asked one question designed to indicate their psychological locus of control--"In general, do you feel pretty much in control of your life, or do you feel buffeted about by things around you?" The above questions constituted the set of hypothetically independent variables. The interview culminated in two tests of a hypothesized two-part dependent variable--(1) a health assessment which accounted for number of physician visits, number of non-elective surgical procedures/hospitalizations, presence of chronic conditions, and drug use; and (2) the Impact of Event Scale (Horowitz, 1978). No standard social support scale was deemed potential situation-specific enough to tap the independent variables. We devised our own health assessment in the interest of saving interview and analysis time, and the IOE represents a standard, well-validated instrument.

The social support measures were quite detailed and follow examples set by other social support instruments and their authors (McAllister and Fischer, 1978; Kadushin, 1983; Wethington and Kessler, 1986) by eliciting information about standard social and

social support items. For example, subjects were asked if there was anyone in their life they could count on to lend them $200, bail them out of jail, go to a movie, etc. They were asked to name people in whom they were certain they could confide in a variety of difficult situations, e.g., learning of a terminal diagnosis, a child's substance abuse, their grief. They answered these questions for "now" (the day of the interview (1985-86)) and also for the period immediately following the death of their husband (time bereaved ranged from 6 months to 4 years; none of the potential subjects contacted had been bereaved for more than 4 years). In this way we hoped to obtain a picture of the changes, if any, in "personnel" and perceived support between acute and later stages of grief, including resolution. The instrument was appoved by the Human Subjects Committee of the Graduate Center of the City University of New York.

Data from the completed instruments were transferred to McBee cards and then entered and processed on computer using a standard sociological statistics package (SPSS). Data were verified by frequency distributions and crosstabulations. Measures of central tendency and dispersion were obtained for all variables prior to discretionary recoding. Subprogram "Breakdown" was used to discern variance within demographic and other subgroups. Two-tailed t-tests of differences between means were used to measure significant differences between group members and controls and other subgroups. Factor analysis with varimax rotation was performed on variables which were predicted to cluster, and the factor was tested for its capacity to predict the dependent variables. Multiple stepwise regression was performed on this

group of variables, which was hypothesized to constitute a "favored" sociodemographic status set, and the scale was tested for internal consistency. ANOVA tested the variance explained by group membership and locus of control. Comparison of multiple means was done by the Scheffe test. Tables which are not integrated into the text appear on pages 103 to 105. Marginals are presented first by group membership and then by LOC, since subsequent analysis revealed LOC as a discriminant variable of interest.

THE INDEPENDENT VARIABLES

MARITAL STATUS. The great majority of subjects in all age and income groups were presently widowed or had very recently changed their marital status. Of these, 3.9% were living with someone, and 6.6% had remarried. Few of those who had remarried still belonged to a support group (Chi-square=6.75242, p=.034; Kendall's Tau C = -0.11392, significance = 2093) but most of the re-engaged people in the support group subsample had only very recently graduated from the group. About half of the still unmarried/not living with someone women had gone out on at least two dates. Dating was more common in older women than younger women, perhaps because the number of young men available is smaller or because adjustment is reported to be more difficult for young women. None of the women who had remarried were bereaved less than one year. Their mean age, income, and educational level were statistically equivalent to those of the unmarried group.

But they were more likely to have an internal than an external locus of control (Kendall's Tau c = .12015, significance = .0097).

Table I
MARITAL STATUS OF SUPPORT GROUP MEMBERS AND CONTROLS

	Support Group	Control Group
Married	4.3%	16.7%
Living With Someone	3.4	5.6
Widowed	92.2	77.8
	99.9	100.1
	N=116	N=36

Table II
MARITAL STATUS OF RESPONDENTS WITH INTERNAL AND EXTERNAL LOCUS OF CONTROL

	Internal Locus	External Locus
Married	9.5	5.1
Living With Someone	8.1	--
Widowed	82.4	94.9
	100.0	100.0
	N=74	N=78

AGE. The study sample was relatively youthful. Over half of the women were under 50 years old, although only a small percent was under 40. Another third of the women was between 50 and 60 years old. Less than 20% were older than 60. The oldest respondent was 91. The youngest was 36. The median age was 49.5 years, and the mean age was just a few years younger (47). Six of the widows who were 85 and older lived out in the country, were relatively impoverished, isolated, estranged from their children,

and in poor health. They were network- and friend-less--possibly due to some combination of non-favored sociodemographic status and personal disposition. These people were more likely to be in a support group than not (Kendall's Tau C = .1371, significance = .0365), but they were neither more nor less likely to have an internal or external locus of control (Kendall's Tau C = -.0727, significance = .2093).

The youthfulness of respondents could be due to sampling error, older widows' deaths or older, more affluent widows' moving out of an area with very harsh winters. Women with grown children are also freer to relocate without worrying about wrenching their children from school or friends. Some of our respondents with young children mentioned considering but rejecting relocation for that reason.

Table III
AGE OF SUPPORT GROUP MEMBERS AND CONTROLS

	Support Group	Control Group
Less than 40 years old	11.2%	16.7%
40 to 49 years old	42.2	16.7
50 to 59 years old	31.0	33.3
60 to 69 years old	10.3	27.8
70 to 79 years old	--	5.6
80 and older	5.2	---
	99.9	100.1
	N=116	N=36

Table IV
AGE OF RESPONDENTS WITH INTERNAL AND EXTERNAL LOCUS OF CONTROL

	Internal Locus	External Locus
Less than 40 years old	12.2	12.8
40 to 49 years old	36.5	35.9
50 to 59 years old	25.7	37.2
60 to 69 years old	16.2	12.8
70 to 79 years old	2.7	--
80 and older	6.8	1.3
	100.1	100.0
	N=74	N=78

EDUCATION. This was also a very well-educated sample. Over half of the women were college-educated. Another twenty percent held degrees at the master's or doctoral level. This distribution may be due to the unusually well-educated population of a county which houses IBM and four colleges. A check of county census records reveals that the county is relatively well-educated but that our sample is somewhat--1.1 years of schooling--better educated than the rest of the county. Group members were NOT significantly (Chi-square = 5.804, significance = 0.1216; Kendall's Tau C = -.11392, significance = .0554) better educated than nonmembers, discouraging speculation that group members might be group members because they are more articulate, more aggressive problem-solvers, more social in their problem-solving, more efficient or more formal networkers. Surprisingly, the women with only a high school education tended to have an internal locus of control (Chi-square=18.27, significance =.0011), while internal and external locus of control were otherwise rather evenly

distributed in different educational levels.

Table V
EDUCATION OF GROUP MEMBERS AND CONTROLS

	Support Group	Control Group
High school Diploma	20.7%	22.2%
College Graduate (BA)	53.4	69.4
Masters Degree	17.2	8.3
MD PHD	8.6	---
	99.9	99.9
	N=116	N=36

Table VI
EDUCATION OF RESPONDENTS WITH INTERNAL AND EXTERNAL LOCUS OF CONTROL

	Internal Locus	External Locus
High school Diploma	27.0%	15.4%
College Graduate (BA)	54.1	60.3
Masters Degree	14.9	15.4
MD PHD	4.1	9.0
	100.1	100.1
	N=74	N=78

INCOME. This was also a fairly affluent sample, with nearly a third of these mostly single women having annual incomes in excess of $35,000. This, too, is not representative of Dutchess County, but could reflect our well-educated sample and the fact that, even though we have a relatively young sample, older women are more likely to be widowed than are younger women and also more likely to be affluent than younger women. The county census results are pulled down by teenagers and other youthful members of the job market. Also, most middle-class widows are the

beneficiaries of insurance settlements on their husbands' deaths. Support group membership and income were independent (Chi-square = 6.7102, significance = .1520), as were income and locus of control (Kendall's Tau C = .12431, significance = .0852).

Table VII
INCOME OF SUPPORT GROUP MEMBERS AND CONTROLS

	Support Group	Control Group
Less than $10,000 per year	8.6%	16.7%
11,000 to 20,000	17.2	22.2
21,000 to 30,000	41.4	22.2
31,000 to 40,000	15.5	11.1
41,000 +	17.2	27.8
	99.9	100.0
	N=116	N=36

Table VIII
INCOME OF RESPONDENTS WITH INTERNAL AND EXTERNAL LOCUS OF CONTROL

	Internal Locus	External Locus
Less than $10,000 per year	20.3%	1.3%
11,000 to 20,000	17.6	19.2
21,000 to 30,000	25.7	47.4
31,000 to 40,000	16.2	12.8
41,000 +	20.3	19.2
	100.1	99.9
	N=74	N=78

HEALTH. The sample was, by its own report, in good health. (This was later confirmed by our objective measure.) We included this variable in the demographic summary because its status as an independent/dependent variable was at that point ambiguous--and

because we were interested in how self-report compared with objective assessments. Thus at the beginning of the interview, we inquired, "How would you rate your health?" Then after the independent variables had been collected and the IOE administered, we said, "You said earlier that you were in (good) health. Can you tell me a little more about that? How many times in 1985 did you go to the doctor? How many times were you admitted to the hospital? How many broken bones, colds, etc. did you have? Do you have any chronic conditions for which you are under continuous medical supervision? What prescription drugs do you take?

Eighty-eight percent reported that their health was good or fair. Over half of the women bereaved more than one year reported that they had had more frequent health events, including fractures, infections, and minor surgery since their bereavement, particularly in the first year. These may be fortuitous attributions--more health events may be noticed and remembered during times of intense emotional arousal. Frequent chronic conditions in the over-50 age group were diabetes, arthritis, hypertension. None of these people reported that their hypertension was exacerbated by their grief, even though they had worried that it would be. The women with diabetes revealed that hyperglycemia followed dietary and not emotional disruptions, although the two were frequently coterminous. Popular wisdom has it that emotional stress aggravates high blood pressure. That these women were disinclined to over-connect stress with pathology and over-attribute the latter to the former leads us to believe that they are fairly "reliable" reporters. However, many of those who self-reported excellent health were moved down to the level of

good health by our objective scoring. Health and support group membership were independent (chi-square = 3.56913, significance = .1679, Kendall's Tau C + .03324, significance =.3166).

Table IX
SELF-RATED HEALTH OF SUPPORT GROUP MEMBERS AND CONTROLS

	Support Group	Control Group
Good Health	31.0%	33.3%
Fair Health	62.1	50.0
Poor Health	6.9	16.7
	100.0	100.0
	N=116	N=36

Table X
SELF-RATED HEALTH OF RESPONDENTS WITH INTERNAL AND EXTERNAL LOCUS OF CONTROL

	Internal Locus	External Locus
Good Health	29.7	33.3
Fair Health	54.1	64.1
Poor Health	16.2	2.6
	100.0	100.0
	N=74	N=78

EMPLOYMENT. The great majority of women were employed. 12% had returned to school full-time. The new students' ages ranged from 41 to 76. 45% of the employed respondents had professional jobs--including work as traditional professionals such as teachers and artists as well as the more affluent, prestigious doctors, lawyers and university professors. 23% of the employed respondents held nonprofessional positions, all of them in service jobs in restaurants, offices, and retail stores. Support group

membership and employment were independent (chi-square = 7.6778, significance = .2076), but women with jobs, especially professional jobs, and women who had returned to school tended to have an internal rather than an external locus of control (chi-square = 3.83698, significance = .005; Kendall's Tau C = .14266, significance = .0157).

Table XI
EMPLOYMENT OF SUPPORT GROUP MEMBERS AND CONTROLS

	Support Group	Control Group
Professional job	46.6%	38.9%
Non Professional Job	24.1	16.7
No Job	15.5	38.9
Student	13.8	5.6
	100.0	100.1
	N=116	N=36

Table XII
EMPLOYMENT OF RESPONDENTS WITH INTERNAL AND EXTERNAL LOCUS OF CONTROL

	Internal Locus	External Locus
Professional job	40.5%	48.7%
Non Professional Job	18.9	25.6
No Job	28.4	14.1
Student	12.2	11.5
	100.0	99.9
	N=74	N=78

RESIDENCE. We were interested in the town and country problem (Kadushin, 1983). Over half of the women lived in the small city which is the county seat. It is small, but big enough to have suburbs in which another third lived. Less than twenty

percent of the sample, including most of the extremely aged and unhealthy as well as some of the more successful women, lived out in the country. People who lived in the country were for the most part either very rich or very poor. Group members tended to live closer to Poughkeepsie than did controls (Chi-square = 20.66, significance = .0001; Kendall's Tau B = .354, significance = .0001).

Table XIII
RESIDENCE OF SUPPORT GROUP MEMBERS AND CONTROLS

	Support Group	Control Group
Metropolitan Area	63.8%	22.2%
Suburban Area	27.6	50.0
Rural Area	8.6	27.8
	100.0	100.0
	N=116	N=36

Table XIV
RESIDENCE OF RESPONDENTS WITH INTERNAL AND EXTERNAL LOCUS OF CONTROL

	Internal Locus	External Locus
Metropolitan Area	45.9%	61.5%
Suburban Area	37.8	28.2
Rural Area	16.2	10.3
	99.9	100.0
	N=74	N=78

CHILDREN. The majority of women had grown children who did not live at home and who were economically independent. Women with children at home, however, constitute nearly forty percent of the study sample, probably reflecting the youthful sample. A

small percentage of women of all ages were childless, and some of the very old, poor women reported that they were estranged from their children. All of the women with young children reported that their children were having a difficult time grieving and that this was the source of problems at home, although at the same time nearly all of these women said, "if I didn't have the kids to take care of, I don't know what I would do." This squares with the view that giving love and support is as important as receiving it. That women with young children had confidants, outside affiliations and were in good mental and physical health supports our view that having children in school might force some mothers to network or give them the opportunity to do so for car pools, music lessons, sports, PTA activities, etc. It conflicts with evidence from a recent study which found that single (divorced, separated and never married) women with young children were more likely to be isolated and depressed than women in any other group (Alwin and Converse, 1986). Perhaps widows are not in this category because there are no recriminations over the separation/death and because the children are an important tie to the deceased. Women with grown children reported that their children were a great source of support, despite their own grief, presumably because, in contrast to the young children, they had already undergone separation/individuation. The support group members had significantly more children at home than did the controls; the controls had more grown children than the support group members; almost equal numbers of controls and group members were childless; the only women who reported being estranged from their children were support group members. Locus of Control was

unaffected (Kendall's Tau C = .04115, significance=.2307; Kendall's Tau C = .0637, significance = .1684).

Table XV
CHILDREN OF SUPPORT GROUP MEMBERS AND CONTROLS

	Support Group	Control Group
Children at Home	44.8%	16.7%
Grown Children	32.8	66.7
No Children	17.2	16.7
Estranged Children	5.2	--
	100.0	100.1
	N=116	N=36

Table XVI
CHILDREN OF RESPONDENTS WITH INTERNAL AND EXTERNAL LOCUS OF CONTROL

	Internal Locus	External Locus
Children at Home	36.5%	39.7%
Grown Children	39.2	42.3
No Children	17.6	16.7
Estranged Children	6.8	1.3
	100.1	100.0
	N=74	N=78

RELIGION. Over half of the respondents were Catholic. 37% were protestant and 7% Jewish. Dutchess County is 60% Catholic, 28% protestant and 10% Jewish. Religion was associated neither with outcome nor any of the other independent variables, particularly being in the support group (Kendall's Tau C = -.01247, significance = .4299) and locus of control (Kendall's Tau C = .13296, significance = .0546).

Table XVII
RELIGION OF GROUP MEMBERS AND CONTROLS

	Support Group	Control Group
Catholic	55.2%	55.6%
Protestant	36.2	38.9
Jewish	8.6	5.6
	100.0	100.1
	N=116	N=36

Table XVII
RELIGION OF RESPONDENTS WITH INTERNAL AND EXTERNAL LOCUS OF CONTROL

	Internal Locus	External Locus
Catholic	60.8%	50.0%
Protestant	35.1	38.5
Jewish	4.1	11.5
	100.0	100.0
	N=74	N=78

YEARS BEREAVED. The majority of women had been bereaved for two to three years. Sixteen percent were bereaved one year or less, and thirteen percent for four years. Not even very recent bereavement was significantly associated with total IOE scores; however, most recent bereavement was associated with relatively high intrusion scores and a slight reduction in physiological health as compared to the less recently bereaved. We were surprised to learn that recent bereavement accounted for as little of the variance in outcome as it did since a widow's location in the "adjustment process" has been reported to have a significant effect on psychological well-being (Bankoff, 1983).

Table XIX
YEARS BEREAVED FOR SUPPORT GROUP MEMBERS AND CONTROLS

	Support Group	Control Group
Less than one year	19.0%	5.6%
1-2 years	46.6	16.7
2-3 years	27.6	44.4
3-4 years	6.1	27.8
4 years	.8	5.6
	100.1	100.1
	N=116	N=36

Table XX
YEARS BEREAVED FOR RESPDONDENTS WITH INTERNAL AND EXTERNAL LOCUS OF CONTROL

	Internal Locus	External Locus
Less than one year	20.3%	11.5%
1-2 years	37.8	41.0
2-3 years	28.4	34.6
3-4 years	10.8	9.7
4 years	2.7	3.1
	100.0	99.9
	N=74	N=78

SERVICE UTILIZATION. All of the widows knew that some sort of professional counselling was available to them, but only 60% actually considered seeing a psychiatrist, psychologist, social worker or other mental health professional, and only 6% did (This rate of attrition is presented in the tables below). Only 3% saw their mental health professional more than four times.

Table XXI
PROFESSIONAL HELP FOR GROUP MEMMBERS AND CONTROLS

	Support Group	Control Group
Knew Professional Help Available	100.0%	100.0%
Considered getting Professional Help	41.0	20.0
Got Professional Help	2.5	7.5
	N=116	N=36

Table XXII
PROFESSIONAL HELP FOR RESPONDENTS WITH INTERNAL AND EXTERNAL LOCUS OF CONTROL

	Internal Locus	External Locus
Knew Professional Help Available	100.0%	100.0%
Considered Getting Professional Help	40.0	24.0
Got Professional Help	1.5	7.5
	N=74	N=78

OUTSIDE AFFILIATIONS. The majority of women had a hobby or interest which brought them into an outside organization at least twice a month. We excluded belonging to the PTA and to a widows' group. Being affiliated with at least one outside organization was positively associated with mental and physical health.

Table XXIV
NUMBER OF AFFILIATIONS OF GROUP MEMBERS AND CONTROLS

	Support Group	Control Group
No organizational affiliation	8.6%	2.6%
1 organizational affiliation	69.4	65.1
2 affiliations	14.7	16.2
3 or more affiliations	7.3	16.1
	100.0	100.0
	N=116	N=36

Table XXIV
NUMBER OF AFFILIATIONS OF RESPONDENTS WITH INTERNAL AND EXTERNAL LOCUS OF CONTROL

	Internal Locus	External Locus
No affiliation	17.6%	2.6%
1 affiliation	17.3	62.1
2 affiliations	60.9	17.5
3 or more affiliations	4.1	17.8
	99.9	100.0
	N=74	N=78

CONFIDANTS AND SOCIAL SUPPORT. The presence of confidants was conceived as an independent variable, and it was expected that, if the original hypothesis was correct, support from confidants would be linked etiologically to outcome. Since our method involved looking at social support and the presence of confidants as potentially discriminant items, we will present them as independent variables and discuss their more complex nature presently. 75% of respondents had three or more people they could count on as confidants. Only 8% could think of no one to help them in any of the hypothetical situations, and these women had no one to help them in ALL of the situations. The entire sample reported significantly more friends than family members as confidants. However, people who did have confidant relatives kept them as confidants over time (from acute grief to the present), while friend confidants tended to change as bereavement progressed, probably because many past friendships were predicated on the woman's being part of a couple and indeed on having an entirely different social identity. In general, this sample was very problem-solving oriented. They would not call their parents

or daughter, even though these were frequently mentioned as the most important confidant, to bail them out of jail. They would call their lawyers. They would not call their mothers or daughters when they had a health problem. They would call their doctor. They appeared to have very clear ideas about differential domain, and they were very instrumental in their approach to social support. They went right to the most promising source. Group members had significantly (p=.001) more (but not necessarily better quality) confidants than controls. People with external LOC had significantly (p=.012) more confidants than people with internal LOC.

Table XXV
NUMBER OF CONFIDANTS OF GROUP MEMBERS AND CONTROLS

	Support Group	Control Group
No confidants	6.0%	11.1%
One confidant	7.8	16.7
2 confidants	17.2	33.3
3 confidants	19.0	16.7
4 or more confidants	49.9	22.3
	99.9	100.1
	N=116	N=36

Table XXVI
NUMBER OF CONFIDANTS OF RESPONDENTS WITH INTERNAL AND EXTERNAL LOCUS OF CONTROL

	Internal Locus	External Locus
No confidants	12.2%	2.6%
1 confidant	13.5	6.4
2 confidants	24.3	17.9
3 confidants	10.8	25.6
4 confidants	39.2	47.4
	100.0	99.9
	N=74	N=78

Social support was measured as potential support from social ties in a variety of hypothetical situations. We asked, "Is there anyone in your life that you can call up to go out for a drink or to a movie? Who is it? (What is that person's relationship to you, e.g., friend, sister, brother, daughter, etc.)." "Is there anyone that you know you could call to bail you out of jail if you needed that?" "Is there anyone who would help you with a minor repair around the house?" "Is there anyone you know you could talk to about your husband or how you feel about his death?" People were also asked if indeed they had ever had to ask anyone for help in the different situations, and how it had worked out. Three scales composed of several variables were devised to measure COMPANIONSHIP, PRACTICAL HELP, and EMOTIONAL SUPPORT. While we recognize that much support is fairly diffuse, diffuse support usually comes from the significant other, in this case, from the dead spouse. Thus new widows' support sources are probably rather well-differentiated and compartmentalized rather than diffuse and single-source. Support group members had significantly higher emotional and practical support scores than did controls. Locus of control made no difference. However, the support groups had significantly more members with internal than external LOC.

Table XXVII
SOCIAL SUPPORT OF GROUP MEMBERS AND CONTROLS

	Support Group	Control Group
Emotional support	5.4741	4.5000*
Practical support	5.5603	4.7222**
Companionship	1.7845	1.5556
	N=116	N=16

2-tailed T-test
*p=.028
**p=.026

Table XXVIII
SOCIAL SUPPORT OF RESPONDENTS WITH INTERNAL AND EXTERNAL LOCUS OF CONTROL

	Internal Locus	External Locus
Emotional support	5.2838	5.2051
Practical support	5.4730	5.2654
Companionship	1.7838	1.6795
	N=74	N=78

LOCUS OF CONTROL. Since we were not measuring personality in detail and had simply included this item out of curiousity, we did not use standard instrumentation but rather measured locus of control by response to the question, " Do you feel pretty much in control of your life, or do you feel buffeted about by external forces?" A positive response to the former clause indicated an internal locus of control; a positive response to the latter an external locus. Group members, women with children, non-low income women, women with confidants, women with outside affiliations, and professional women had significantly greater internal LOC than did others ($p = .041$), and internal LOC was

associated with positive outcome.

Table XXIX
LOCUS OF CONTROL OF GROUP MEMBERS AND CONTROLS

	Support Group	Control Group
Internal Locus	44.0%	63.9%
External Locus	56.0	36.1
	100.0	100.0
	N=74	N=78

Controls and group members showed statistically equivalent (p less than or equal to .05) means for all independent measures with the exception of education (group members significantly better educated than controls), residence (more group members lived in the country than controls) and number of confidants (group members had significantly more confidants than did controls). Subjects with internal and external LOC showed equivalent demographic profiles and differed in only one of the other independent variables--number of confidants. People with external LOC had significantly (p=.012) more confidants than did people with internal LOC. As previously noted, people with internal LOC had significantly better total emotional support scores than did people with external LOC (p=.000), but the detailed support items were statistically equivalent for both groups.

THE DEPENDENT VARIABLES

DEPRESSION. We asked, "Do you feel depressed?" 72% answered that they were not--raising the possibility that denial and ignorance figure strongly in responses to such questions. Again,

we did not use detailed instrumentation for already cited reasons and also because we were most interested in self-report despite the problems it entails. The resulting statistic included all of the women with young children and was invariably followed by the remark "I am too busy to be depressed." The remainder answered that they were somewhat or very depressed. There was no connection between depression and IOE--supporting our speculation that IOE may not be useful as a measure of global mental health, that serious grief work does not necessarily coexist with depression, or that denial or ignorance are operative here. There was also no association between early bereavement and depression.

Table XXX
SELF-RATED DEPRESSION OF GROUP MEMBERS AND CONTROLS

	Support Group	Control Group
Not depressed	70.7%	80.8%
Somewhat depressed	23.3	14.1
Very depressed	6.0	5.1
	100.0	100.0
	N=116	N=36

Table XXXI
SELF-RATED DEPRESSION OF RESPONDENTS WITH INTERNAL AND EXTERNAL LOCUS OF CONTROL

	Internal Locus	External Locus
Not depressed	62.2%	75.0%
Somewhat depressed	32.4	22.2
Very depressed	5.4	2.8
	100.0	100.0
	N=74	N=78

PHYSICAL HEALTH. The sample was in good health, both by its

own report and our objective measure. Number of physician visits presence of chronic conditions and drug use increased with age, and were more prominent in low-income, non-working, childless women ($p = .043$) of all ages. The salient questions were, has health changed in any direction since the onset of bereavement, and how strongly was physical health associated with mental health? We asked women with chronic conditions which had been present before their bereavement if the conditions had worsened. They had worsened in the very aged (something which we really cannot impute to bereavement or poor coping), the poor, those estranged from their children, and the affiliate- and confidant-less. External LOC was strongly associated with fair or poor health, and with negative health changes since bereavement. Poor health impairs networking in addition to diminishing one's ability to attract support.

Table XXXII
HEALTH SCORE OF GROUP MEMBERS AND CONTROLS

	Support Group	Control Group
Excellent Health	31.7%	29.6%
Good Health	49.3	30.5
Fair Health	12.2	31.1
Poor Health	6.8	8.8
	100.0	100.0
	N=116	N=36

Table XXXIII
HEALTH SCORE OF RESPONDENTS WITH INTERNAL AND EXTERNAL LOCUS OF CONTROL

	Internal Locus	External Locus
Excellent Health	29.9%	19.4%
Good Health	37.5	29.6
Fair Health	31.0	42.3
Poor Health	1.6	8.6
	100.0	99.9
	N=74	N=78

IMPACT OF EVENT. The IOE showed a binomial distribution with peaks at the moderate (30-40) and very high (50-60) levels. The most common score was a moderate score; this was followed by the low score (below 29) and the very high score (50-60). The mean score was 48.53, which falls in the high range. The median score is considerably lower, 39.20, or moderate. In this sample, unlike others (Zilberg, Weiss and Horowitz, 1982) Intrusion and Avoidance subset scores tended to be similar in each respondent, rather than wildly divergent as expected for people with certain coping styles. TOTAL IOE's were, unexpectedly, unaffected by the passage of time, supporting evidence that chronic reactions may be concomitants of unresolved stress following catastrophic events (Erikson, 1976; (Bowlby, 1963).

Table XXXIV
IMPACT OF EVENT SCORE FOR MEMBERS AND CONTROLS

	Support Group	Control Group
Mean Intrusion	21.828*	18.083*
Mean Avoidance	16.086**	21.083**
Mean Total	38.026	39.167
	N=116	N=36

2-tailed T-test
*p=.001
**p=.0001

Table XXXV
IMPACT OF EVENT SCORE FOR RESPONDENTS WITH INTERNAL AND EXTERNAL LOCUS OF CONTROL

	Internal Locus	External Locus
Mean Intrusion	21.649	20.269
Mean Avoidance	20.500*	14.205*
Mean Total	42.405**	34.397**
	N=74	N=78

2-tailed T-test
*p=.0001
**p=.0001

ASSOCIATIONS BETWEEN THE DEPENDENT AND INDEPENDENT VARIABLES

Further analysis took several different tacks. Since we were able to eliminate subsample variance in the independent variables as a significant problem, we began to look for a discriminant variable or set of variables. Bivariate correlations shed little light on the subject. A "favored status" consisting of

demographic and other event-specific items was hypothesized, tested for reliability and tested for its ability to predict outcome. Reliability testing disclosed that a favored status set consisting of age (not too young, not too old), education, income, employment, children, residence, number of confidants and years bereaved achieved an internal reliability of alpha=.7113. Favored status was moderately negatively associated with the IOE Avoidance subset but not significantly associated with physical health. The impact of LOC by group membership was tested by ANOVA, with significant variance in outcome (IOE) explained by LOC by group membership.

DISCUSSION

In the course of the theoretical and conceptual discussion and presentation of the data distributions from the study, we have already mentioned and even fleshed out some of the connections between psychosocial and outcome variables. The literature on stress and health pointed toward personality as probably specifically predictive of outcome and at least interactive with circumstance. Our data have borne this out and suggest that social support is an important mediating variable in stress reactions, but we think that it should be viewed as an achievement of personality. We also agree that the probable confluence of independent variables should be worked into research (Kobasa & Puccetti, 1983). We recognize that our study collapsed personality into LOC, and this is an important weakness in our argument. Even though we believe that some credence should be given to what people THINK is so, since they probably act on this

basis, LOC and other personality variables are multifocal and most carefully measured by the scales which were designed to do the concepts justice. The one thing in our favor is that other studies utilizing full standard measures have shown similar results. LOC is the personality variable consistently implicated in reaction to stress, and this is the object of interest. What components of the IOE shed light on outcome?

As we have noted, there is consensus about the meaning of the intrusion subset but considerable interpretive leeway in the avoidance subset. This subset may be considered a measure of the perceived demands generated by high intrusion and/or a measure of the deliberate "dosing" achieved by the individual who is working hard at coping. People with internal LOC had lower total IOEs and lower subsets than people with external LOC. But group members, the majority of whom have internal LOC, had higher intrusion scores than controls, while controls had higher avoidance scores than group members. We believe that avoidance can represent denial (probably a bad thing, but only in our society (Amir and Sharon, 1978)), can flag unusually high levels of intrusion, or can be evidence of the desire to reduce preoccupation with intrusion and get on with living. In and of itself, that group members experienced more intrusion and controls more avoidance suggests a number of possible interpretations:

(1) group members experience more intrusive affect than controls;

(2) group members admit more intrusive affect than controls;

(3) group members are more in touch with their feelings than are controls;

(4) group members are more disturbed by or more expressive of these feelings that they are in touch with, and they join groups to ventilate and legitimate their emotions;

(5) group members benefit from having their acknowledgement of the intrusive affect validated by their peers;

(6) group members are more dependent upon the dynamics of the formal group meeting and its permissive theater for the processing and legitimation of these feelings;

(7) group members are less able to control their feelings than controls, and controls are better at dosing themselves but have to work very hard at it;

(8) controls have similar feelings but are less aware of them, in touch with them, willing to admit them, able to process them, inclined to share them (several older controls mentioned that they were brought up not to show emotion in public and would feel very uncomfortable discussing their grief with others);

(9) controls are less articulate, expressive and socially adept;

(10) controls are more resilient and more socially adept and do not need to join formal groups to handle their problems;

(11) controls are able to network and repair independently of formal settings and to process and validate their feelings and their identity in other ways. Even when the most socially disenfranchised women were pulled out of analysis, controls reported fewer confidants than did group members, and they were more externally oriented to LOC. This casts some doubt on this point.

(12) controls practice denial and/or sublimation more skillfully than do group members. Israeli social policy architects would approve of these management techniques--they are pragmatists and behaviorists and believe that high emotive expressive loss behavior disrupts the social fabric and also constitutes disequilibrating, self-perpetuating activity for the individual, who should get on with it (Amir and Sharon, 1978). The competing contemporary philosophy is that

(13) The question remains, are the variant-by-group Intruson/ Avoidance scores due to self-selection, or do support groups encourage that kind of thing?

What is the significance of a chronically high IOE? One of our subjects was bereaved 4+ years and showed a total score of

60--with the highest possible scores in both subsets. After this much time, we can only speculate as to the meaning of this. If intrusive content and avoidance efforts remain intense we may be looking at pathological grief (Anderson, 1949; Bowlby, 1963)--at But we would have to be able to gauge the situation with more than the IOE. And this is not a paper about grief. However, among other things, grief involves loss of control at two levels, the death itself, and management of emotional arousal. The latter is secondary damage superimposed upon already compromised sense of internal control (deCharms, 1968). At some point, some of this control begins to reassert itself. IOE Intrusion:Avoidance ratios reflect this in their reflection of the level of intrusive content and (reactive) avoidance behavior over time. Interminable mourning (Aleksandrowicz, 1963) is pathological, is most common in children, and is associated with unformed personality, personality disorder, mental illness, traumatic circumstances and sociodemography (Amir and Sharon, 1978; Bowlby, 1963; Gay, 1983; Anderson, 1949; Freud, 1919/57; Erikson, 1976). Grief is a process of detachment and reattachment; it acts like a disease (Engel, 1961) and runs a course like a disease but is not one unless it fails to complete itself (Bowlby, 1963).

The end of grief is signalled by the restoration of multiplex personality and the rekindled propensity to establish new bonds. The latter begins long before full grieving is complete. Normal grief work takes about two years but is not completely over until approximately five years have passed (Amir and Sharon, 1978). During this time the mourner is simultaneously experiencing and

fighting disengagement and beginning to engage in reconstruction. Progress is erratic (Kubler-Ross, 1967). We are not certain that one administration of the IOE at 1-4 years of grief gives an accurate description of mental health or even incipient recovery. No such claim is made for it, of course, but the implication that measuring the extent of trauma-related affect and management efforts indicates something about mental health is hard to resist. We think that the IOE administered at 1,3,5 and 7 or 10 years would not only show progress (Zilberg, Weiss and Horowitz, 1982) but also imply --but only imply--stable factors of personality and mental health, especially coping style, better than any single measure. Health measures, too, MUST include baseline profiles if they are to have any descriptive validity.

In sum, nearly all of the widows in our sample had a variety of support resources both in their early bereavement and at the time of the interview. Some of the personnel shifted, but it was obvious that networking had continued, and, in many cases, expanded. These widows also had confidants who were significant sources of affection and legitimation. People with external LOC were more likely to have sought professional help and also more likely to vacillate or come up empty-handed when asked to name a source of affection or affirmation. Those who were bereft of support networks during their early bereavement had none at the time of the interview. Those who had full support networks during their early bereavement had full support networks at the time of the interview. (For the most part, the family members of the support network remained in place from Time 1 to Time 2. In contrast, subjects tended to name different friends as support

sources in their later bereavement than immediately after their husband's death.) We think that this gives credence to our hypothesis that social support is an achievement of stable personality factors and that personality generates the social support which is so widely associated with health. Social support for any widow depends upon a variety of factors, including the stage at which she is in her process of transition (Bankoff, 1983). This study also emphasized that:

(1) social support is an elusive phenomenon. It is difficult to measure because the ultimate arbiter is a recipient whose view is contingent upon attribution and efficacy; because structural measures show only whether support is potentially available and mechanical measures are reactive and subject to impression management; and because support is heavily intertwined with personality and other variables. We think that social support is a function of personality and we concur with the view that the only social support which is worth measuring is the social support which is associated with positive outcomes--perceived support (Worthington & Kessler, 1986);

(2) social support can exert positive and negative effects--positive when it affirms autonomy and resilience, negative when it encourages indefinite victimization, involution and dependence;

(3) the support group is not a substitute for absent or deficient primary ties. The majority of respondents both in the support group and the control group had (statistically equivalent) strong primary ties. Membership in the support group represented radial, instrumental networking which complemented rather than

supplanted or substituted for the primary group.

The social support group was more heavily populated by people with internal LOC than people with external LOC. People with internal LOC both within and without the support group did better than people with external LOC. For people with internal LOC, being in a support group had no significant effect on outcome. On the other hand, people with external LOC in the support group did worse than people not in the group (cf. Kadushin (1983) on the dependence of rural Vietnam veterans on their veterans' groups).

If group membership represented aggressive problem-solving behavior, how did external LOCs get into the group, and why did they remain in it? A network analysis of group entrance showed that almost everyone entered the group via someone in their radial network who was in the group or knew someone who was in it and thought it would be a good idea for the subject to join. Group entrance appeared to depend upon individual networking despite the fact that formal invitations and information were issued by the social services department during the terminal illness or at the time of death. There was an interval of 4 weeks to 6 months between the death and group entrance for members who stayed in the group. People who joined earlier in their bereavement tended to drop out. We would like to argue that EVERYBODY networks--but that people with internal LOC network more efficaciously and use their social ties to greater advantage. People with external LOC also network and they may engage in problem-solving by eliciting the concern of professionals and others; it would have been interesting to study the group process and whether external LOCs

remained in the group longer than internal LOCs, thereby suggesting possible dependence.

Group membership was not dependent on favored status, but, all the same, since we think of group membership as aggressive problem-solving behavior, we were curious about how our least favored respondents got into the support group. These apparently --from our interviews--utterly psychologically and socially disenfranchised women were brought to group meetings by facilitators and other members who drove to the county margins to fetch and return them.

(4) Locus of control explains some of the variance in IOE and in health status. In this study, sociodemographic variables were unexpectedly poor predictors of outcome and of LOC. People with external LOC over-rated their bad health; people with internal LOC underrated their bad health (the differences were not statistically significant). This could also be due to denial or impression management.

(4) LOC is probably a function of constitution and of support during personality development. Parental locus of control is associated with favored demographic status (Wheaton, 1982); favored status, which failed to predict outcome in this sample, gets a consolation position: non-favored status--being poor, poorly educated, very aged, unemployed, isolated, living in the country, estranged from children, without outside affiliations--is an effective predictor of poor outcome. That being socially marginal is bad for one's health has been known at least since Victorian England, but even though favored status obviates

(including by providing the opportunity to buy social support) the most apparent pretexts for demoralization, being socially favored isn't a sufficient progenitor of good health. The only women in this sample who had long-term relationships with mental health professionals for their bereavement were high-income people with external LOC. Internal LOC, on the other hand, appears to overcome disadvantages incurred by SES and other demographics for both group members and controls. Whether these hardy personalities achieved support through formal or informal channels appeared to be immaterial--they were better socially supported and they were also in better health than their externally oriented peers. Their social support and their health were more strongly related to their LOC than they were to each other--suggesting that if social support affects health it intervenes positively for someone who has the personality attributes to network and mobilize support effectively. Some research has suggested that studies associating social support with good outcomes are actually measuring hardiness (Ganellen & Blaney, 1984). Social support is universally available and probably universally experienced, but the need for it, its uses and management are variant. This probably stems from personality and disposition which are mediated not only by culture but by the psychosocial support delivered during development. The quality of the nurturance provided by parents, friends, significant others and social institutions impacts upon psychosocial viability so powerfully that social policy should probably focus on "preventive maintenance" aspects of mental health in addition to or instead of the palliative sort of stress management currently practiced.

This study is by no means the first that has suggested that constitutional variables are as important as environmental variables in determining outcome. Nor is it original in positing a dynamic link between the two. But we would like to stress that social support has been overemphasized as an independent variable and not presented as an effect of personality, coping style, circumstance, etc., and this needs to be stressed. Hence our emphasis on locus of control and its suggestion of aggressive problem-solving, confidence, etc. Unfortunately, the locus of control measure one of the weak links in our argument, and, with the wisdom of hindsight, the study would have been designed quite differently, incorporating Rotter's LOC scale (1978) and multifocal measures of hardiness (Kobasa, 1979). Our social support instrument was too long, and had a considerable amount of extraneous detail while failing to tap some things of subsequent interest, like the effect of the passage of time and life events on networking AND locus of control, and the effect of support during personality development on loss and reengagement in adulthood. In retrospect, we would like to have measured personality in great detail, mental health more broadly, and physical well-being more much more rigorously--over time. Then there are truly serious problems incurred by the retrospective nature of the design and by sampling which unavoidably utilized a very small group of poorly matched controls. Nevertheless, we hope that studies on the extent to which personality variables affect social support and on how personality and social support are associated with variant outcome are forthcoming.

Two-tailed T-tests Showing

the Effect of Locus of Control on the Dependent Variable

Impact of Event	Mean	SD	Probability
Internal Locus	31.6593	5.753	
External Locus	48.8361	7.925	.000
Intrusion			
Internal Locus	18.8631	4.359	
External Locus	24.1475	6.118	.000
Avoidance			
Internal Locus	12.8132	4.811	
External Locus	24.3924	6.224	.000
Depression			
Internal Locus	1.0989	0.300	
External Locus	1.7049	0.691	.000
Health			
Internal Locus	2.0000	0.000	
External Locus	1.7705	0.424	.000

TABLE XXXII

Analysis of Variance in IOE by Group Membership
by Locus of Control

SOURCE OF VARIATION	SUM OF SQUARES	DF	MEAN SQUARE	F	SIGNIF OF F
MAIN EFFECTS	2441.007	2	1220.503	12.715	0.000
Group Membership	5.847	1	5.847	0.061	0.805
Locus of Control	2405.251	1	2405.251	25.057	0.000
2-WAY INTERATION	699.556	1	699.556	7.288	0.008
Group LOC	699.556	1	699.556	7.288	0.008
EXPLAINED	3140.563	3	1046.854	10.906	0.000
RESIDUAL	14206.918	148	95.993		
TOTAL	17347.480	151	114.884		

Two-tailed T-tests Showing LOC-variant Outcome in Support Group and Control Group

INTERNAL LOC

Total Impact of Event	Mean	SD	P
Support Group	48.9750	7.810	.852
Control Group	48.5714	8.328	
Health			
Support Group	2.0500	1.724	.493
Control Group	2.3810	1.884	

EXTERNAL LOC

Total Impact of Event			
Support Group	32.3553	5.547	.008
Control Group	28.1333	5.655	
Health			
Support Group	1.3421	.9460	.043
Control Group	1.6667	1.0333	

TABLE XXXIII

Scheffe Test of Mean Impact of Event Score
by Locus of Control

VARIABLE IMPACT OF EVENT
BY VARIABLE LOCUS OF CONTROL

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB.
BETWEEN GROUPS	1	2435.1239	2435.1239	24.494	0.000
WITHIN GROUPS	150	14912.3867	99.4159		
TOTAL	151	17347.5078			

BIBLIOGRAPHY

Ader, R. and N. Cohen "Behaviorally Conditioned Immunosuppression" Psychosomatic Medicine, 37:333-340, 1975

American Psychiatric Association, Diagnostic and Statistical Manual of Mental Disorders, Third Edition, American Psychiatric Association Press (Washington, D.C.: 1980)

Amir, Y. and I. Sharon, "Factors in the Adjustment of War Widows in Israel," in I.G. Sarason and C.D. Spielberger, eds., Stress and Anxiety, Vol. 8 (New York, McGraw-Hill: 1978)

Anderson, C., "Aspects of Pathological Grief and Mourning," International J. of Psychoanalysis, 30:48-55, 1949

Antonovsky, A., Health, Stress and Coping (San Francisco, Jossey-Bass: 1979)

Archer, Robert P., "Generalized Expectancies of Control, Trait Anxiety and Psychopathology among Psychiatric Inpatients," J. Consul. and Clin. Psych., Dec. 1980, 48:6, 736-742

Averill, J.R. "Personal Control over aversive stimuli and its relation to stress" Psychological Bulletin, 1973, 80: 286-303

Averill, J.R., L. O'Brien and G. deWitt "The influence of response effectiveness on the preference for warning and on psycho-physiological stress reactions" J. of Pers., 1977, 45:395-418

Barrera, M. and P. Balls, "Assessing Social Support as a Prevention Resource: An Illustraive Study" Prevention in Human Sciences, 2:4, 59-74, 1983

Bankoff, Elizabeth, "Effects of Friendship on the Psychological Well-Being of Widows," Research in the Interweave of Social Roles, 1981 (2) 109-139

Bartrop, R.W., E. Lockhurst, L. Lazarus, L.G. Kiloh, and R. Penny, "Depressed Lymphocyte Function after Bereavement," Lancet, 1:834-836, 1977

Bell, Dion, Lecture Notes on Tropical Medicine (London, Tavistock: 1979)

Bennet, Glin, "Bristol Floods 1968: Controlled Survey of Effects on Health of Local Community Disaster," British Medical Journal, 3:454-458, 1970

Berkman, L. F. and L.S. Syme, "Social Networks, Host Resistance and Mortality: A Nine-year Follow-up Study of Alameda County Residents," Am. J. of Epid., 69:186-204, 1979

Biegel, D.F., Naparstek, G.K. and S. Kahn, "Social Support and Mental Health," presented at annual APA meetings, Montreal, Canada, September, 1980

Borysenko, M. and J. Borysenko "Stress, Behavior and Immunity: Animal Models and Mediating Mechanisms" Gen. Hosp. Psychiatry, 4:59-67, 1982

Boulanger, Ghislaine "Post-Traumatic Stress Disorder: A Valid Diagnosis?" APA Annual Meetings, August 1982

Bowlby, J. "Pathological Mourning and Childhood Mourning," J. of Amer. Psychoanalytic Assoc., 2:500-541, 1963

Brecher, H.K., "Relationship of Significance of Wound to Pain Experienced," JAMA, 161:1609-1613, 1956

Brehm, J.W. A Theory of Psychological Reactance (NY: 1966)

Brown, G.W., M. Brolchain and T. Harris, "Social Class and Psychiatric Disturbance among Women in an Urban Population," Sociology 1975, 9:225-254

Brown, G.W. and T. Harris, Social Origins of Depression: A Study of Psychiatric Disorder in Women (London: 1978)

Burchfield, S.R. "The Stress Response: A New Perspective" Psychosomatic Medicine, 41:661-672

Burge, S.K., and Charles R. Figley, "The Social Support Scale: Development and Initial Estimates of Reliability and Validity," mss., 1984, The Child and Family Research Institute of Purdue University

Callahan, Daniel, "Contemporary Biomedical Ethics," New England J. of Medicine, 302:1228-1233, May 29, 1980

Carey, John T., Michael M. Lederman, Zahra Toosi, Kay Edmonds, Sally Hodder, Leonard H. Calabrese, Max R. Profitt, Carol E. Johnson, Jerrold J. Ellner, "Augmentation of Skin Test Reactivity and Lymphocyte Blastogenesis in Patients with Aids Treated with Transfer Factor," JAMA, February 6, 1987, 257:5, p. 651-655

Cobb, Sidney, "Social Support as a Moderator of Life Stress," Psychosomatic Medicine, 38:300-314, 1976

Cockerham, Wm. C., Gerhard Kunz, Guenther Lueschen, and J.L. Spaeth, "Social Stratification and Self-Management of Health," J. of Health and Social Behavior, 27:1, 1-13, 1986

Corah, N.L. and J. Boffa "Perceived control, self-observation and response to aversive stimulation" J. of Personality and Social Psychology, 1970, 16:1-4

Coser, Rose Laub, "The Complexity of Roles as a Seedbed of Individual Autonomy," in L. Coser, The Idea of Social Structure, (New York, Harcourt, Brace, Jovanovich: 1975)

Costa, P.T., Jr., and R.R. McCrae "Still Stable After all these Years: Personality as a key to some issues in adulthood and old age" in P.S. Bates and O.G. Brian, eds., Life Span Development and Behavior (NY: 1980)

deCharms, R. Personal Causation: the Internal Affective Determinants of Behavior (NY: 1968)

Dohrenwend, B.P. and B.S. Dohrenwend, eds., Stressful Life Events: Their Nature and Effects (New York: 1974)

Durkheim, Emile, The Division of Labor in Society (Glencoe, Ill., Free Press: 1902/1960)

Elliott, G. and S. Eisdorfer, Stress and Human Health: Analysis and Implications for Research (New York, Springer Verlag: 1982)

Eitinger, L., "A Follow-up Study of the Norwegian Concentration Camp Survivors' Mortality and Morbidity," Israel Annals of Psychiatry and Related Disciplines, 11: 199-209, 1973

Erikson, Kai T., Everything in its Path (New York, W.W. Norton: 1976)

Fischer, C.L., J.C. Daniels, S.L. Levin, S.L. Kimzey, E.K. Cobb and W.E. Ritzman "Effects of the Spaceflight Environment on Man's Immune System: II. Lymphocyte Counts and Reactivity" Aerospace Medicine, 43:1122-1125, 1972

Friedman, M. and R.H. Rosenman, Type A Behavior and Your Heart (New York: 1974)

Freud, S., Mourning and Melancholia, in Vol. 14, Collected Works (London, Hogarth: 1919/1957)

Ganellen, Ronald J. and Paul H. Blaney, "Hardiness and Social Support as Moderators of Stress," J. Pers. Soc. Psych. 47:1 145-155, 1986

Gartner, Alan, Audrey J. Gartner and Suzanne C.O. Kobasa, "Self-Help Treatments," mss., Graduate Center of the City University of New York, 1984

Glass, D.C., B. Reim and J.E. Singer "Behavioral Consequences of Adaptation to Controllable and Uncontrollable Noise" J. of Experimental Soc. Psych., 1971, 7:244-257

Glass, D.C., J.E. Singer and L.N. Freedman, "Psychic Cost of Adaptation to an Environmental Stressor," J. of Personality and Social Psychology, 12:200-210, 1969

Gottlieb, Benjamin H., Social Networks and Social Support (Beverly Hills, Calif.: 1981)

Granovetter, Mark, "The Strength of Weak Ties," Am. Journal of Sociology, 78:6, 1360-1380, 1973

Green, Bonnie L., "Assessing Levels of Psychological Impairment Following Disaster: Consideration of Actual and Methodological Dimensions," J. of Nervous and Mental Disease, 170:9,544-552, 1982

Greenblatt, M., R. Becerra and A.E. Serafetinides, "Social Networks and Mental Health: An Overview," Am. J. of Psychiatry, 139:8, 977-984, 1982

Gregory, Larry W., "Locus of Control for Positive and Negative Outcomes," J. Pers. Soc. Psych., Aug. 1979, 36:8, 840-849

Hall, Judith A., Barbara J. Mroz, Karen G. Braunwald, "Expression of Affect and Locus of Control," J. Pers. Soc. Psych., July 1983, 45:1, 156-162

Ham, R.O. and L.T. Cotton, "Mortality and Social Inequalities," letter in the Lancet, August 30, 1986 (517)

Hammer, M. "Social Supports, Social Networks and Schizophrenia" Schiz. Bulletin, 1981, 7: 45-47

Haynes, S.G. and M. Feinleib, "Women, Work and Coronary Heart Disease: Prospective Findings from the Framingham Heart Study," Am. J. of Public Health, 16:5, 1980

Henderson, S. "A Development in Social Psychiatry: the Systematic Study of Social Bonds," J. of Nerv. and Ment. Dis., 168:63-69, 1980

Holahan, Charles J. and R.H. Moos, "Life Stress and Health: Personality, Coping and Family Support in Stress Resistance," J. Pers. Soc. Psych. 49:3, 739-747, 1985

Holmes,T.H. and R.H. Rahe "The Social Readjustment Rating Scale" J. of Psychosomatic Medicine, 11:213-218, 1967

Holmes, R.H. and M. Masuda, "Life Change and Illness Susceptibility" in B.S. and B.P. Dohrenwend, eds., Stressful Life events (New York: 1974)

Holmes, D.S. and B.K. Houston "Effectiveness of situation redefinition and affective isolation in coping with stress" J. of Pers. and Soc. Psych., 1974, 29:212-218

Horowitz, M., N. Wilner and W. Alvarez, "Impact of Event Scale: A Measure of Subjective Stress," Psychosomatic Medicine, 41:3, 209-218, 1979

House, J.S. and R.L. Kahn, "Measures and concepts of social support" in S. Cohen and L. Syme, eds., Social Support and Health (New York: 1984)

House, James S., V. Strecher, H. Metzner and C.A. Robbins, "Occupational Stress and Health Among Men and Women in the Tecumseh Community Health Study," J. of Health and Social Behavior, 27:1, 62-77, 1986

Houston, B.K. "Control over stress, locus of control and response to stress" J. of Pers. and Soc. Psych., 1972, 21:249-255

Husaini, B.A., J.A. Neff and M.C. Moore, "Mediating Role of Social Support and Locus of Control in Depression Symptomatology," unpublished manuscript, University of Tennessee, 1981

James, W.E.S., G.F. Badger and J.H. Dingle "A Study of Illness in a Group of Cleveland Families: The Epidemiology of the Acquisition of group A streptococci and of associated Illness" New England J. of Med., 262:687, 1960

Janney, James G., M. Masuda and T.H. Holmes, "Impact of a Natural Catastrophe on Life Events," J. of Human Stress, 22-34, 1977

Jemmot, John B. III and Steven E. Locke, "Psychosocial Factors, Immunologic Mediation, and Human Susceptibility to Infectious Diseases: How Much Do We Know?" Psychological Bulletin, 95:1, 78-108, 1984

Kadushin, Charles "Mental Health and the Interpersonal Environment: A Reexamination of Some Effects of Social Structure on Mental Health" Amer. Soc. Review, 48: 188-198, 1983

Kahn, Sharon, "Manifestations of Learned Helplessness in Vietnam Veterans," unpublished manuscript, City University of New York, 1984

Kasl, S.V., A.S. Evans and J.C. Neiderman, "Psychosocial Risk Factors in the Development of Infectious Mononucleosis" Psychosomatic Medicine, 41:445-466, 1979

Kaplan, Berton H., John C. Cassel and Susan Gore "Social Support and Health," Medical Care, 1977, 15:5, 47-57

Kelly, H.H. and J. W. Thibaut "Experimental Studies of group problem-solving and process" in G. Lindzey, ed., Handbook of Social Psychology, Vol. II (Cambridge: 1954)

Kessler, R.C. and Jane MacLeod "Social Support and Mental Health in Community Samples" in Sheldon Cohen and Leonard Syme, eds., Social Support and Health (New York: 1984)

_____ "Sex Differences in Vulnerability to Undesirable Life Events" American Soc. Review, 49:620-631, 1984

Kimzey, S.L. "The Effects of Extended Spaceflight on Hematologic and Immunologic Systems" J. of Amer. Med. Women's Assoc., 30(5):218-232, 1975

Kinston, Warren and Rachel Rosser, "Disaster: Effects on Mental and Physical Health," J. of Psychosomatic Research, 18: 437-456, 1974

Kitagawa, E.M. and P.M. Hauser, Differential Mortality in the U.S.: A Study in Socio-Economic Epidemiology," (Cambridge, Mass., Harvard University Press: 1973)

Kobasa, Suzanne C. O. "Stressful Life Events, Personality and Health: An Inquiry into Hardiness" J. of Pers. and Soc. Psych., 1979, 37:1-11

Kobasa, Suzanne C. O., S.R. Maddi and Sheila Courington, "Personality and constitution as Mediators in the Stress-Illness Relationship," Journal of Health and Social Behavior, 22:4, 368-378, 1981

Kobasa, Suzanne C. O. and M.C. Puccetti, "Personality and Social Resources in Stress Resistance," Journal of Personality and Social Psychology, 45:4, 839-850, 1983

Kohn, M.L., "Class, Family and Schizophrenia," Social Forces, 50, 1972, 295-302

Kraus, A. and A. Lilienfeld, "Some Epidemiological Aspects of the High Mortality Rate in the Young Widowed Group," J. of Chronic Disease, 10:207-217, 1959

LaRocco, James M., James S. House and John R.P. French, Jr., "Social Support, Occupational Stress and Health" J.

Lazarus, R.S. "Cognitive and Personality Factors Underlying Stress and Coping" in S. Levine and N. Scotch, eds., Social Stress (Chicago, Ill.: 1970)

Lefcourt, Herbert M., Carl L. von Baeyer, Edward E. Hare, Dianne J. Cos, "The Multidimensional-multiattributional Causality Scale: the Development of a Goal Specific Locus of Control Scale," Can. J. Beh. Sci., Oct. 1979, 11:4, 286-304

Lilienfeld, A.M. and D.E. Lilienfeld, Foundations of Epidemiology (New York, Oxford University Press: 1980)

Lin, Nan, W.M. Ensel, R.S. Simeone, and W. Kuo, "Social Support, Stressful Life Events, and Illness: A Model and an Empirical Test," J. of Health and Soc. Behav., 20:108-119, 1979

Leavy, Richard L. "Social Support and Psychological Disorder, A Review" J. of Community Psych., 11, 1983

Liu, Wm. T., "Culture and Social Support," Research on Aging, 8:1, 57-83, March 1986

Liu, Wm. T. and Elena S.H. Yu, "Refuge Status and Alienation Theory: the Case of the Vietnamese in the United States," Sociological Abstracts, 26:3, 1978

Locke, S.E. "Stress, Adaptation and Immunity: Studies in Humans" Gen. Hosp. Psychiatry, 4:49-58, 1982

McAllister, Lynne and Claude S. Fischer "A Procedure for surveying personal networks" Sociological Methods and Research, 1978, 7:131-48

MacFarlane, Allan H., K.A. Neale, G.R. Normal, R.G.Roy and D.L. Streiner, "Methodological Issues in Developing a Scale to Measure Social Support," Schizophrenia Bulletin, 198:90-100, 1982

Madsen, N., The Mexican Americans of South Texas (New York: 1973)

Mandelbaum, D.G., "Psychiatry in Military Society," Human Organization, 13:19-25, 1955

Mandelbaum, D.G., Soldier Groups and Negro Soldiers (Berkeley, University of California Press: 1952

Marmot, M.G. and M.E. McDowall, "Mortality Decline and Widening Social Inequalities," The Lancet, 8501:II, 274-276, 1986

Marshall, S.L.A., "Individual Summary," in S.M. Field and S.W. Davis, eds., Fatigue and Stress Symposium, Chevy Chase, Md., January 24-26, 1952, proceedings published by the Operations Research Office (Baltimore, Md.: 1952)

Mason, J.W. "A Historical Review of the Stress Field" J. of Human Stress, 1(2):22-36, 1975

Monjan, A.A. "Stress and Immunologic Competence: Studies in Animals" in R. Ader, ed., Psychoneuroimmunology (New York: 1981)

Mortality and Morbidity Weekly Report, "Perspectives in Disease Prevention and Health Promotion: Report of the Secretary's Task Force on Black and Minority Health," JAMA, June 27, 1986, Vol 255:24, 3347-3351

_____, "Human T-Lymphotropic Virus Type III/Lymphadenopathy-Associated Virus: Agent Summary Statement," August 29, 1986 35:4, pp. 540-549

Nuckolls, K.B., J. Cassel and B.H. Kaplan, "Psychosocial Assets, Life Crisis and the Prognosis of Pregnancy," Am. J. of Epidemiology, 95:431-441, 1972

Palmblad, J., P. Bjorn J. Wasserman and T. Akerstedt, "Lymphocyte and Granulocyte Reactions during Sleep Deprivation" Psychosomatic Medicine, 41:273-278, 1979

Parkes, C.M., "Recent Bereavement as a Cause of Mental Illness," British Journal of Psychiatry, 110:198-204, 1964

Pilisuk, Marc and M. Minkler, "Social Support: Economic and Political Considerations," Social Policy, 15:3, 1985

Pool, Ithiel de Sola and Manfred Kochen, "Contacts and Social Influence" Social Networks 1:5-52, 1978

Rabkin, J. G. and E.L. Streuning "Life Events, Stress and Illness" Science, 194:1013-1020, 1976

Riessman, Frank, "New Dimensions in Self Help," Social Policy 15:3, 1985

Riley, V. "Psychoneuroendocrine Influences on Immunocompetence and Neoplasia" Science, 212:1100-1109, 1981

Risenberg, Donald E., "Can Mind Affect Body Defenses Against Disease? Nascent Specialty Offers a Host of Tantalizing Clues," JAMA, 256:3, 313-317, July 18, 1986

Rogers, M. P., D. Dubey and P. Reich "The Influence of the Psyche and the Brain on Immunity and Susceptibility: A Critical Review" Psychosomatic Medicine, 41: 147-164, 1979

Schachter, Stanley "The Interaction of Cognitive and Physiological Determinants of Emotional State" in P. H. Lieberman and D. Shapiro, Psychological Approaches to Social Behavior (Palo Alto, Calif.: 1964)

Schafer, Arthur, "The Ethics of the Randomized Clinical Trial," New Eng. J. of Med., 307:719-724, September 16, 1982

Schleifer, S.J., S.E. Keller, F.P. McKegney and M. Stein, The Influence of Stress and Other Psychosocial Factors on Human Immunity. Paper Presented at the 36th Annual Meeting of the Psychosomatic Society, Dallas, 1979

Schroeder, David H. and Paul T. Costa, Jr., "Influence of Life Event Stress on Physical Illness: Substantive Effects or Methodological Flaws?" J. of Pers. and Social Psych., 1984, 46:4, 853-863

Seidman, Dennis, "Influence of Partner on Shock Tolerance," S.B. Bensen, I. Miller, Tor Meeland, eds., Report of the Human Research Unit #2, Department of the Army, 210-212, 1956

Seligman, M.E.P. and Steven F. Maier, "Failure to Escape Traumatic Shock," J. of Experimental Psych., 74:1, 1-9, 1967

Selye, Hans, The Physiology and Pathology of Exposure to Stress (Montreal, Acrta: 1950)

Sherman, I.W. and V.G. Sherman, Biology (New York, Oxford University Press: 1979)

Shinn, M., S. Lehmann and N.W. Wong, "Social Support as Process," unpublished manuscript, New York University, 1984

Simmel, Georg, The Web of Group Affiliations (N.Y., Free Press: 1922/1955

Stroebe, Margaret S., Wolfgang Stroebe, Kenneth J. Gergen and Mary Gergen, "The Broken Heart: Reality or Myth?" Omega: Journal of Death and Dying, 12:2, 87-106, 1981-2

Theorell, T., "Selected Illness and Somatic Factors in Relation to Two Psychological Stress Indices--a Prospective Study on Middle-aged Construction Building Workers," J. of Psychosomatic Research, 20:7-20, 1976

Thoits, Peggy A., "Conceptual, Methodological and Theoretical Problems in Studying Social Support as a Buffer Against Life Stress," J. of Health and Soc. Behav, 41:29-47, 1982

Thompson, Suzanne C. "Will it Hurt Less if I Can Control It? A Complex Answer to a Simple Question" Psychological Bulletin, 90:1, 89-101, 1981

Vachon, M.L.S., W.A.L. Lyall and J. Rogers, "A Controlled Study of Self-Help Intervention for Widows," Am. J. of Psychiatry, 137:1380-1384, 1980

Vaillant, G.E. "Natural History of Male Psychologic Health: Effects of Mental Health on Physical Health" New Eng. J. of Med., 301:1249-1254, 1979

Vaughan, M.A. and James T.C. Li, "Prevention of Aids: Lessons from Osler," New England J. of Med., June 12, 1986, p. 1578

Weber, J.N., Robin A. Weiss, Carol Roberts, Ian Weller, Richard S. Tedder, Paul R. Clapham, David parker, Julian Duncan, Christopher Carne, Anthony J. Pinching, Rachanee Cheengsons-Popov, "Human Immunodeficiency Virus Infection in Two Cohorts of Homosexual Men: Neutralising Sera and Association of Anti-gag Antibody with Prognosis," Lancet, 17 January 1987, pp. 119-121

Wellman, Barry "The Community Question: the Intimate Networks of East Yorkers," Am. J. of Sociology, 84:1202-31, 1979

Wethington, Elaine and Ronald C. Kessler, "Perceived Support, Received Support and Adjustment to Stressful Life Events," J. of Health and Social Behavior, 27:1, 78-89, 1986

Wheaton, Blair, "A Comparison of the Moderating Effects of Personal Coping Resources on the Impact of Exposure to Stress in Two Groups," J. of Community Psych., 10: 293-311, 1982

Williams, A.W., J.E. Ware and Cathy A. Donald, "A Model of Mental Health, Life Events and Social Supports Applicable to General Populations," J. of Health and Soc. Behav., 22:324-336, 1981

Wortman, Camille B. "Social Support and the Cancer Patient: Conceptual and Methodologic Issues" American Cancer Society Workshop Conference: Methodology in Behavioral and and Psychosocial Cancer Research, St. Petersburg Beach, Florida, April 21-23, 1983

Wortman, Camille B. and Terry Conway, "The Role of Social Support in Adaptation and Recovery from Physical Illness," in S. Cohen and S.L. Syme, eds, Social Support and Health, (New York: 1985)

Wortman, Camille B. and D.R. Lehman, "Reactions to Victims of Life Crises: Support Attempts that Fail," in I.B. Sarason and B.R. Sarason, eds., Social Support: Theory, Research and Application (The Hague, Netherlands, Martinus Nijhog: 1984)

Zautra, Alex, "The Social Support Scale," mss. 1980

Zilberg, N.J., D.S. Weiss and M.J. Horowitz, "Impact of Event Scale: A Cross-Validation Study and Some Empirical Evidence Supporting a Conceptual Model of Stress Response Syndromes," J. of Consulting and Clinical Psych., 50:3, 407-414, 1982