

Lawton, Kleban, Moss, Rovine & Glicksman's (1989) construction of caregiving appraisal is examined through a principal components analysis and varimax rotation of a data set based on in-depth quantitative interviews with 144 caregivers. Five caregiving appraisal dimensions were identified. Two dealt specifically with the provision of care: "task load caregiving" and "dysfunctional caregiving." The remaining three were primarily concerned with social supportiveness: "intimacy and love," "social captivity," and "social distance." "Dysfunctional caregiving" was the only type of appraisal that had significant bivariate relationships with poor mental health, low psychological well-being and subsequent institutionalization. A sixth dimension identified in this analysis, "inner strength and efficacy," represented psychological resources. Its independence from the appraisal measures supports Lawton et al.'s (1989) assumption that resources and appraisals can be measured separately. In contrast, social resources are better conceptualized as an integral part of caregiving appraisals.

Key words: Task load caregiving, Appraisal variables, Well-being, Stress

Between Stressors and Outcomes: Can We Simplify Caregiving Process Variables?

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Informal caregiving for the frail aged has moved from descriptive beginnings to a number of theoretically driven approaches, one of the most influential being stress theory. Stress models of caregiving range from the simple to the complex. Consensus surrounds the endpoints of the models. Stressors are widely interpreted as the environmental conditions that demand adaptation by the caregiver. In general, stressors are operationalized as the physical, mental, or functional health of the care receiver. The outcome variables have been variously conceptualized as the caregiver's level of life satisfaction, mental health, physical health, and willingness to continue providing home care or institutionalization. The models differ substantially in the number of stages and the number of constructs that are seen to play a role between these two endpoints.

One of the most simple models has been proposed by Lawton, Kleban, Moss, Rovine, and Glicksman (1989) and Lawton, Moss, Kleban, Glicksman, and Rovine (1991). They argue that the appraisal and reappraisal variables of perceiving threat, coping, and perceptions of impacts cannot be causally differentiated, and that they are best considered as part of a general appraisal construct. Thus, the stressor, that is, the phenomenon that exists outside the body of the caregiver, gives rise to caregiving appraisals that in turn affect psychological well-being. Psychological well-being is viewed as the outcome of caregiving and, while also subjective, is more global, transcending the caregiving experience. Resources are defined by Lawton et al. (1991) as strengths either within the

person or in the external world that may be drawn upon in coping with stress. Their model, therefore, has four key constructs: stressors, appraisals, resources, and outcomes.

In contrast to this basic conceptualization is the elaborate model proposed by Pearlin, Mullan, Semple, and Skaff (1990): background and stress context variables lead to primary stressors and secondary stressors, which lead to secondary role strains, which lead to secondary intrapsychic strains, which lead to outcomes. Mediators in the form of types of resources are shaped by context and background, and impinge on the last four stages in the development of a stress reaction.

Whether one opts for a simple or a complex model to make theoretical sense of relevant variables, caregiving stress studies, in the aggregate, have produced a complex pattern of findings. Stressors, resources, and appraisals each subsume a number of more specific concepts. Some of these concepts are multidimensional, requiring several variables for adequate representation. If these variables were shown to function as discrete units, the problem for caregiving research would not be as serious. The stress paradigm, however, theoretically links these variables together. Empirically, the interconnectedness appears to be supported, so much so that some have argued that distinctions are being made between concepts that are empirically indistinguishable (Dohrenwend, Dohrenwend, Dodson, & Shrout, 1984; George & Gwyther, 1986; Kinney & Stephens, 1989; Stull, Kosloski, & Ketcher, 1994; Vitaliano, Young, & Russo, 1991).

While empirical and theoretical distinctiveness has been a general problem for stress researchers, difficulties are magnified in the caregiving context by the

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absence of temporal distinctiveness. As initially conceived, the stress process has four temporal stages: (1) observing the outside stimulus, (2) interpreting the stimulus, (3) deciding upon and/or making a response, and (4) experiencing adaptation to the new situation. Such sequencing of events has no measurable parallel within the caregiving context. Events, appraisals, reappraisals, and adjustments are happening simultaneously. As one event is being appraised, another is occurring, and yet another is being responded to.

Lawton's Proposed Simplification

One obvious approach to dealing with an unwieldy and interconnected conceptual framework is to simplify it. Lawton et al. (1989) undertook this task, arguing that there is considerable theoretical advantage in grouping the subjective and interpretative variables together under caregiving appraisal, regardless of whether they constitute recognition of a problem, an analysis of the problem, or a response to the problem. By means of factor analysis, they have claimed support for three factors: (1) satisfaction (e.g., helping makes me feel closer to her), (2) burden (e.g., lost control of life), and (3) impact (e.g., social life has suffered). Two other hypothesized dimensions that await confirmation are personal efficacy and mastery, and the quality of the caregiver-care receiver relationship.

Lawton and his colleagues' (1989, 1991) notion of caregiving appraisal allows clearer boundaries between the stages of the stress process. Yet some ambiguities remain. Lawton et al. (1989) defined caregiving appraisal as "all cognitive and affective appraisals and reappraisals of the potential stressor and the efficacy of one's coping efforts" (p. P61). At the margins of this appraisal domain are widely used variables that make significant inroads into the domains of stressors and resources. Clarifying the appraisal construct further through including these gray areas in the analysis of the construct is a major goal of this paper.

Stressor-Appraisal Ambiguity

One of the most popular ways of assessing the needs of the care receiver is through asking caregivers to report on the assistance they require (Lawton et al., 1991). Such measures represent perceived demand. Perceived demand is the stimulus that shapes the workload of the caregiver. Many researchers would group these variables together with objective assessments of functional well-being as the environmental stressors of caregiving. Unlike core appraisal variables, they are objectively verifiable.

Nevertheless, these variables entail a subjective and interpretative component. They are cognitive assessments of what the care receiver cannot do for him- or herself. What caregivers believe needs to be done for the care receiver does not always match others' assessments of functional ability. Spouse caregivers, for instance, have been shown to underestimate the self-care abilities of care receivers

(DeBettignies, Mahurin, & Pirozzolo, 1993). Caregivers' beliefs about needs, therefore, hover between the domain of the environmental stressor and the domain of caregiving appraisal.

Resources-Appraisal Ambiguity

Similar blurring of boundaries arises between appraisals and resources. At one level, the idea is simple enough: appraisals are evaluations of one's situation while resources are the strengths one has at one's disposal. Resources typically are personal (e.g., self-esteem, neuroticism, mastery), social (e.g., availability and adequacy of a social network), and material (e.g., having money or services). Previous research has shown that resources are an integral part of how potential threats are interpreted and dealt with (Crossman, London, & Barry, 1981; Holahan & Moos, 1985; Levine, Dastoor, & Gendron, 1983; Thompson, Futterman, Gallagher-Thompson, Rose, & Lovett, 1993). If caregivers are actually aware of their resources as part of the "efficacy of . . . [their] coping efforts," that is, as part of their appraisal of the situation, the problem of overlapping constructs again emerges.

Research Goals

One approach to resolving what should be included or excluded from the caregiving appraisal construct is to use empirical findings to inform and perhaps even forge further theoretical distinctions. This article implements this approach through gathering together a set of independent variables that represent caregiving appraisal and the ambiguous domains of perceived stressors and perceived resources. Initially, this study uses principal components analyses to answer three questions:

- (a) Do perceived stressors and self-reported resources define separate factors from the appraisal variables in the way assumed by Lawton and his colleagues (1989, 1991)? If they do, the case for excluding perceptions of care receiver needs and caregiver resources from the appraisal domain is strengthened.
- (b) Can Lawton et al.'s appraisal dimensions of satisfaction, burden, and impact be confirmed? If these dimensions are robust, counterparts should be identifiable in other data sets that share a similar definition of caregiving appraisal.
- (c) Can any support be found for Lawton et al.'s hypothesized dimensions of caregiving mastery and the quality of the caregiver-care receiver relationship?

The second purpose of this study is to examine whether these dimensions relate to sociodemographic background and outcome variables in different ways. According to stress theory, appraisals of stressors play a major role in shaping adaptation. Thus, one would expect appraisal dimensions to have distinctive and significant relationships with widely used outcomes such as minor psychiatric symptoms (Morris, Morris, & Britton, 1988; Schulz,

Visintainer, & Williamson, 1990), psychological well-being (George & Gwyther, 1986; Lawton et al., 1991), and institutionalization (Aneshensel, Pearlin, & Schuler, 1993; Colerick & George, 1986; McFall & Miller, 1992; Morycz, 1985; Pruchno, Michaels, & Potashnik, 1990). Of particular interest are questions of the following kind: Are symptoms of anxiety and depression more likely to be associated with some appraisal dimensions than others? Is institutionalization associated with a particular type of appraisal? Is psychological well-being low across all types of appraisal?

In addition to outcomes, the caregiving appraisal dimensions should be related to sociodemographic background variables. Women have been reported as having higher burden scores than men, though explanations for this finding remain unclear (Abel, 1987; Graham, 1983; Horowitz, 1985). Spouse caregivers have been shown to have a different caregiving pattern than nonspouse caregivers, interpreting their role differently and often persisting with home care for longer (Horowitz, 1985; Lawton et al., 1991; Montgomery & Kosloski, 1994; Pollitt, Anderson, & O'Connor, 1991). Through examining the relationships between sociodemographic variables and appraisals, the second part of the study seeks to differentiate caregiving experiences and their consequences.

Methods

The Data Base

An Australian caregiver data set (Braithwaite, 1990) was used to explore the dimensionality of caregiving appraisal. The first task was to sample variables that were theoretically consistent with Lawton et al.'s (1989) definition of caregiving appraisal and that were known to be reliable and valid measures. To be eligible for consideration, the variables had to have a subjective component, reflecting what a caregiver believed or felt about the care receiver, about him- or herself, or about the caregiving situation. This process resulted in the selection of 36 variables. While it was important to sample the domain as comprehensively as possible, the final set of variables had to be restricted because of the limitations imposed by the method of analysis. A further nine variables were dropped because they overlapped with other selected measures, or because they were of marginal relevance to the appraisal construct. The final 27 variables represented three facets of the caregiving appraisal domain: (1) six measured caregivers' perceptions of workload demands (theoretically overlapping with both appraisal and stressor, but most times relegated to the stressor domain); (2) seven measured caregivers' resources (theoretically ambiguous in their relationship to appraisal), and (3) fourteen measured caregivers' perceptions of the caregiving context (theoretically and empirically consistent with Lawton et al., 1989).

In addition, this data base provided the sociodemographic and outcome variables: (a) the caregiver-

receiver relationship, (b) living arrangements, caregiver's, (c) paid work, (d) family responsibilities, (e) socioeconomic status, (f) age, (g) sex, (h) psychological well-being (3 measures), (i) minor psychiatric symptoms and care receiver's, (j) institutionalization, (k) age, and (l) sex.

Sample. — Interviews were conducted with 144 caregivers of clients of the day care centers and the community nurses serving the city of Canberra, Australia. Caregivers were defined as unpaid people who assumed major responsibility for providing or organizing services on a regular basis for someone incapable of providing for him- or herself. Major responsibility for service provision had to be in at least one of three areas of daily activity (cleaning, shopping, meal preparation) or one of four areas of personal care (washing, dressing, toileting, mobility), or involve regular supervisory care (checks on well-being more than once a day).

The level of dependency of the care receivers was high: assistance was required by 80% or more of care receivers with each of 11 activities of daily living. The clients suffered from cardiovascular disorders (48%), injury, arthritis, or some other muscular-skeletal disorder (36%), impaired mobility through stroke (28%), dementia, memory loss, or disorientation (27%), and gastrointestinal disorders (19%).

The description of the sample in terms of the caregiver's age, sex, socioeconomic status, and work status, the care receiver's age and sex, and their living arrangement and relationship to each other is summarized in Table 1.

Procedure. — Caregivers were contacted by letter, and those who agreed to participate were telephoned by one of three interviewers. Meetings were arranged for a private discussion of their caregiving experiences either at their homes or at the university, depending on their preference. Structured interviewing, interspersed with unstructured discussions, took place over two and sometimes three sessions, each of about one-and-one-half to two hours' duration. Caregivers completed a questionnaire which was left with them after the first interview.

This process provided all the data used in this study, with the exception of institutionalization. These data were collected for two years after the

Table 1. Characteristics of Caregivers and Care Receivers in the Study

Sample Characteristic	Mean (SD) or Percent
Caregiver's age	58 years (13.04)
Care receiver's age	77 years (10.53)
Caregiver's sex	75% women
Care receiver's sex	61% women
Caregiver's socioeconomic status	38% high, 46% middle, 17% low
Caregivers in paid work	29%
Living arrangements	86% cohabitating
Caregiver-receiver relationship	51% parent or parent-in-law; 43% spouse

interviews by following up with families, nursing staff, and day care center staff.

Measures of Appraisal

Workload Measures

Workload was defined as "the activities in which caregivers engage and the responsibilities which they accept in order to promote the physical and mental well-being of their dependents" (Braithwaite, 1990, p.19). In previous work, perceptions of need and caregiver involvement in meeting that need were empirically inseparable (Braithwaite, 1990). Measures of workload rather than need were included in this study because they were considered closest to the appraisal domain and furthest from the external stressor domain. If the workload construct can be separated empirically from core appraisal variables, other caregiver-based indices of external demand should also be separable.

Workload was conceptualized as being of two kinds: that arising out of physical disability, and that arising out of social-psychological impairment. Until recently, work has been conceptualized predominantly as task-based, but Hochschild (1979) has argued strongly for the recognition of emotional work as an integral part of family life. Where social, cognitive, and emotional impairment has occurred, the emotional work of the caregiver is likely to increase and must be recognized as part of caregiving workload demands.

Perceived Workload: Task-Oriented. — The caregiver's perceptions of the tasks that needed to be done for the care receiver were measured in the areas of *personal care*, *supervision*, and *decision making*. The daily activities measure was not included in this analysis because of the high level of dependency in this sample (see Braithwaite, 1990).

- (a) The *personal care* scale involved five-point ratings from the caregiver of the level of help required with (1) cutting toenails, (2) combing hair or shaving, (3) dressing or undressing, (4) washing hair, (5) bathing, (6) toileting, (7) getting into or out of bed, (8) sitting, standing, or transfers, (9) walking, (10) feeding, and (11) medication ($\alpha = .87, M = 29.78, SD = 11.32$).
- (b) The *supervision* scale comprised three items scored dichotomously: was the care receiver left alone, unsupervised a couple of hours (1) during the day, and (2) during the night, and (3) could the care receiver use the telephone or call for assistance if no one was on hand ($\alpha = .54, M = 4.57, SD = 1.03$).
- (c) The *decision-making* scale was made up of 5 items asking caregivers whether or not the person receiving care made decisions about (1) clothing, (2) food, (3) the daily routine, (4) watching television or listening to the radio, and (5) seeing the doctor ($\alpha = .68, M = 8.95, SD = 2.64$).

Perceived Workload: Social-Emotional. — The social-emotional workload of the caregiver was in-

dexed directly through asking caregivers whether or not they acted as confidant to the care receiver, and indirectly through their perceptions of the breadth and depth of the care receiver's social support system. The justification for using these measures is that when caregivers see no one else available or willing to provide social support, they assume the responsibility for providing this type of care. All measures were developed from the Interview Schedule for Social Interaction (ISSI; Henderson, Byrne, & Duncan-Jones, 1981).

- (a) Available *care receiver* social support was assessed through asking the caregiver: (1) how many people the care receiver had contact with in an ordinary week, (2) how many people with similar interests the care receiver had contact with, (3) how many friends did the care receiver have who could visit at any time regardless of circumstances, (4) how many friends and relatives could the care receiver contact at any time and talk with freely and frankly. The maximum number of people coded for any item was 7 (Henderson et al., 1981; $\alpha = .62, M = 13.59, SD = 6.76$).
- (b) The availability of a *care receiver confidant* was assessed by asking caregivers to name the person who met the following criteria for the care receiver: (1) someone they could lean on, (2) someone they were very close to, (3) someone they could share their happiness with, (4) someone they could share their most private feelings with, and (5) someone who comforted them with a hug. The number of *different* people mentioned in answering these five questions constituted the measure of availability of a confidant ($M = 2.47, SD = 1.15$).
- (c) *Caregiver as confidant* was operationalized as the number of times the caregiver mentioned him/herself as the confidant of the care receiver in answering the set of questions above ($M = 2.83, SD = 1.60$).

Resource Measures

The aspects of the resources domain that overlap with the appraisal domain are restricted to the subjective. This encompasses the caregiver's perceptions of his or her own social support and psychological strengths. Objective characteristics such as material resources are not included in the present analysis.

Resources: Social Support. — Caregivers were asked to answer questions from the Interview Schedule for Social Interaction in relation to themselves regarding the availability of friends and confidants.

- (a) The availability of *social support* scale comprised the following subset of items: (1) how many people caregivers had contact with in an ordinary week, (2) how many people with similar interests they had contact with, (3) how many people they could ask small favours of, (4) how many friends they had who could visit at any time regardless of circumstances, (5) how many friends and relatives they had who they could talk with freely and frankly, and (6) how many people there were who depended on them, particularly for help and advice. The maximum number coded for any item

was 7 (Henderson et al., 1981; $\alpha = .71$, $M = 26.22$, $SD = 9.26$).

- (b) Availability of a *confidant* was assessed using the following items: Is there a particular person who (1) you feel you can lean on, (2) you feel very close to, (3) shares your happiness with you, (4) shares your most private feelings, and (5) gives you a hug ($\alpha = .57$, $M = 9.23$, $SD = 1.11$).

Resources: Personal Characteristics. — The personal characteristics that were measured were *self-esteem* and *mastery*, *perceptions of physical health*, and the personality traits of *sociability* and *emotionality*. All were postulated as indicators of how well-equipped caregivers perceived themselves to be for caregiving. Emotionality, self-esteem and mastery reflect psychological resiliency; health taps feelings of physical resiliency, and sociability represents suitability to the role. Sociability may function as either an asset, a liability, or both for a caregiver at home. While enjoyment of the company of others might make caregiving easier, being limited to the company of one person for much of the day could lead to frustration. These scales were designed to assess the caregiver's behavior generally, with no reference being made to the caregiving context. With the exception of the health measure, responses were made on a five-point scale from "very unlike me" to "very like me." The items belonging to these scales are reported in full in Braithwaite (1990).

- (a) The *mastery* scale, derived from Pearlin and Schooler (1978), comprised six items measuring beliefs in control over one's life and capacity to deal with life's difficulties ($\alpha = .71$, $M = 21.57$, $SD = 4.67$).
- (b) Rosenberg's (1965) 10-item *self-esteem* scale measured beliefs in one's worth, competence and capacity for success ($\alpha = .84$, $M = 40.04$, $SD = 6.64$).
- (c) Caregiver's *physical health* was indexed by a 3-point self-rating scale: good endorsed by 58%, fair by 33%, and poor by 9%.
- (d) The *sociability* scale, based on Buss & Plomin's (1975) EASI-III Temperament Survey (Braithwaite, 1987; Braithwaite, Duncan-Jones, Bosly-Craft, & Goodchild, 1984), measured enjoying the company of others (5 items, $\alpha = .69$, $M = 16.57$, $SD = 4.29$).
- (e) The *emotionality* scale, based on Buss & Plomin's (1975) EASI-III Temperament Survey (Braithwaite, 1987; Braithwaite, Duncan-Jones, Bosly-Craft, & Goodchild, 1984), measured the tendency to be readily upset, fearful, angry, and impulsive (15 items, $\alpha = .83$, $M = 37.50$, $SD = 9.97$).

Caregiving Context Measures

Context variables are appraisal variables when they represent caregivers' perceptions of (a) the way in which caregiving threatens their lives, (b) the positive aspects of the caregiving relationship, (c) the responses of family and friends, and (4) coping strategies. Context is used here to refer to what is going on in the caregiving-care receiving relationship. The subjective element is represented by the fact that these measures are taken from the perspective of the

caregiver, and may not correspond to the perceptions of others.

Context: Coping Strategies. — The coping scales, *seeking solutions* and *reinterpretation and acceptance*, represented the two major dimensions emerging from a factor analysis of a set of items representing strategies that were relevant to caregiving (see Braithwaite, 1990, for further details). Respondents indicated frequency of use of each strategy on a four-point scale, from "never" to "a lot."

- (a) *Seeking solutions* represented problem-focused strategies directed toward controlling the situation through seeking outside assistance and advice: (1) thinking through the problem, (2) discussing the problem with someone, (3) seeing the situation as a challenge to be met, (4) getting assistance with caring from relatives, friends or agencies, and (5) using mechanical aids or devices to ease the caring load ($\alpha = .65$, $M = 13.66$, $SD = 3.09$).
- (b) *Reinterpretation and acceptance* involved changing the meaning of the situation and seeking comfort for oneself. The scale represented emotion-focused and cognitive reframing strategies: (1) telling yourself there is no alternative and you just have to see it through, (2) telling yourself that there are others worse off than you, (3) telling yourself that things could be worse, (4) telling yourself it's the right thing to do, (5) telling yourself to take the good with the bad, (6) telling yourself it isn't as bad as all that (7) telling yourself the problem can't last forever, (8) praying, (9) expressing your feelings (e.g., having a cry, letting off steam), (10) thinking of the good things that have come out of the situation, (11) having a cigarette or a drink, (12) accepting hardship because it's meant to be, and (13) telling yourself you will be a stronger and better person for the experience ($\alpha = .87$, $M = 34.46$, $SD = 8.53$).

Context: Responses From Family and Friends. — Responses from family and friends were assessed through four scales measuring *family's moral support*, *friend's moral support*, *instrumental support*, and *informal backup*.

- (a) The *family's moral support* was measured using the following items: Does your family (1) admire what you are doing, (2) think you have taken on too much, and (3) take your contribution for granted (reverse scored). Responses were made on a three-point scale. The family moral support scale had an alpha reliability coefficient of .65, a mean of 6.67, and standard deviation of 2.11.
- (b) *Friend's moral support* was measured using the same items as above. The friend's support scale had an alpha reliability coefficient of .52, a mean of 7.13, and standard deviation of 1.69.
- (c) *Instrumental support* with caregiving ($M = 3.06$, $SD = .82$) was assessed using two yes-no items: (1) have you asked for help and received it, and (2) have you been offered help and accepted it. The items correlated .35.
- (d) Having *informal backup* ($M = 3.10$, $SD = .74$) was measured through asking caregivers whether or not they had family or friends who would take

over if they were out of action for: (1) two or three days and (2) two or three weeks. The items correlated .34.

Context: Positive Aspects of Caregiving Relationship. — Two positive facets of caregiving were measured: perceptions of reciprocity, and being aware of some personal benefit from caregiving.

- (a) *Reciprocity* was defined in terms of care receiver appreciation and was measured through three items: the care receiver (1) telling or showing the caregiver that her (his) efforts are appreciated and not taken for granted, (2) giving small gifts to the caregiver and/or the caregiver's family, and (3) having a chat with the caregiver to cheer her (him) up. Caregivers responded in terms of "rarely," "sometimes," and "regularly" ($\alpha = .49$, $M = 5.98$, $SD = 1.76$).
- (b) Personal benefit was measured through its polar opposite: *missing nothing*. A small but significant proportion of caregivers (17%) explicitly denied that anything would be missed if they no longer provided care, even after probing by the researcher. In contrast, 83% mentioned things like companionship, keeping busy, having someone in the house, and being useful.

Context: Crises of Decline Variables. — The experiences associated with caring for someone who is increasingly losing the physical and mental control associated with mature adulthood have been referred to elsewhere as the crises of decline (Braithwaite, 1990, 1992). These crises encompass degeneration, hostility, enmeshment, and unpredictability. From the caregiver's perspective, all have been linked with the frustration of basic needs, jeopardizing well-being, and placing the continuation of the caregiving relationship at considerable risk.

- (a) *Emotional, social, and cognitive degeneration* was represented through combining two scales, one focusing on social-emotional loss of control, the other on cognitive loss of control. All behaviors represented in these scales represented deviation from mature adult behavior, and caregivers gave their views on whether each characterized the care receiver using a yes-no format. Social-emotional loss of control included: (1) worries unnecessarily, (2) wants to be the central concern of your life, (3) goes on and on about certain things, (4) constantly demands assistance, (5) gets very upset, may cry, (6) is irritable, (7) gets deeply depressed, (8) has sudden changes of mood, (9) is overly critical, (10) tends to expect the worst all the time, and (11) becomes angry and threatening ($\alpha = .87$, $M = 17.94$, $SD = 3.44$). Cognitive loss of control comprised: (1) does strange things, (2) gets off the subject when having a conversation, (3) gets mixed up about the day, the year, (4) does not understand what is said, (5) is not interested in news of friends or relatives, (6) fails to recognize familiar people and places, (7) does not respond sensibly when spoken to, (8) endangers her/himself, and (9) wanders outside the house ($\alpha = .86$, $M = 13.71$, $SD = 2.96$). Because these two scales were correlated with each other ($r = .48$, $p < .001$) and showed similar patterns of relation-

ships to other variables, they were combined for the analyses below.

- (b) The *physical degeneration* scale also used a yes-no response format and comprised the items: (1) lacks mobility, (2) has trouble controlling bladder, and (3) has trouble controlling bowels ($\alpha = .71$, $M = 4.73$, $SD = 1.13$). These items were phrased to reflect the subjective perceptions of the physical deterioration of the care receiver, and as such, are not proxies for objective demand nor functional independence.
- (c) *Conflict* between caregiver and care receiver was measured by asking caregivers about the frequency of differences of opinion between them. The sample divided evenly across the three response categories of "hardly ever," "sometimes," and "a lot of the time."
- (d) A *history of conflict* between caregiver and care receiver ($\alpha = .84$, $M = 24.09$, $SD = 6.01$) captured the degree to which the care receiver dominated the caregiver in the past (prior to the need for care). The measure, a modified version of Parker's (1978) autonomy scale, comprised eight items representing the amount of independence the caregiver had been given and how much confidence the care receiver had shown in the caregiver's judgment: (1) let me do things I liked doing, (2) liked me to make my own decisions, (3) gave me as much freedom as I wanted, (4) let me decide things for myself, (5) felt I could not look after myself unless she/he was around (reverse scored), (6) was overprotective of me (reverse scored), (7) tried to make me dependent on her/him (reverse scored), (8) tried to control everything I did (reverse scored). Responses were made on a four-point rating scale from "not at all like him/her" to "very like him/her."
- (e) The five item *time constraints* scale ($\alpha = .79$, $M = 9.10$, $SD = 1.41$) represented enmeshment, and asked caregivers whether or not they had (1) missed out on holidays and outings, (2) had to plan holidays and outings well in advance, (3) had less time to spend with the family, (4) had little time to themselves, and (5) had given up interests, leisure activities, and hobbies.
- (f) The *unpreparedness* index had a mean of 3.49 and a standard deviation of 1.36, and comprised two items: how much the caregiver (1) knew about the care receiver's problems when they began to care (reverse scored) and (2) had to learn about providing care. Responses were made on a three-point rating scale from "none" to "quite a lot."

Relevance of Appraisal Dimensions to Outcomes and Background Variables

Data reduction exercises of the kind proposed in this study give rise to concerns that too much valuable information is being lost, and that the newly-developed concepts simply add a new layer to the multitude of concepts already in the literature. Such issues cannot be resolved satisfactorily through one study. Yet one study can give an indication of whether the approach is worth pursuing. Newly-proposed constructs should relate to other variables in a predictable fashion and at the same time add to our understanding of outcomes. The variables used to assess the validity and evaluate the usefulness of the appraisal constructs are detailed below.

Outcome Measures

Minor Psychiatric Symptoms. — Anxiety and depression were assessed using two scales from the Delusions-Symptoms-States Inventory (DSSI/sAD), a self-completion instrument developed by Foulds and Bedford for detecting different clinical syndromes (Bedford & Foulds, 1977; Bedford, Foulds, & Sheffield, 1976; Foulds & Bedford, 1975, 1976). The seven depression items and seven anxiety items (sAD) have been validated within the population from which caregivers were drawn (Henderson, Byrne & Duncan-Jones, 1981). The alpha reliabilities for the anxiety and depression scales in this sample were .86 and .84, respectively. Their intercorrelation was .85 ($p < .01$) and supported the aggregation of scores into one measure ($M = 7.05$, $SD = 6.94$). According to Bedford et al., cases scoring 6 or more can be considered pathological. Forty-seven percent of caregivers fell into this category.

Psychological Well-Being. — Bradburn's (1969) two-factor model of psychological well-being has given rise to measures of positive affect, negative affect, and affect balance. The five-item positive affect scale had a mean of 7.84, a standard deviation of 1.56, and an alpha reliability coefficient of .71. The five-item negative affect scale had a mean of 6.48, a standard deviation of 1.41, and an alpha reliability coefficient of .62. The affect balance scale, representing overall psychological well-being, was calculated through subtracting the negative affect score from the positive affect score ($M = 1.33$, $SD = 2.28$). Bradburn's scales have been used widely as measures of subjective well-being (Andrews & Robinson, 1991).

Institutionalization. — The objective of the follow-up was to find out if caregiving was continuing at home or if an institutional placement had been made. Of the 144 caregivers, 56 were still providing home care, 30 had handed over responsibility for care to a hostel or nursing home, 3 had handed over care to someone else, 29 care receivers had died, and two caregivers had died. The fate of 24 caregivers was not known. The groups that were compared in this study were those who had relinquished care to an institution and those who had continued to provide care at home.

Social-Demographic Characteristics

The sample was coded in terms of whether or not the caregiver was (a) providing support for a spouse (2) or other (1), (b) was living in the same house as the care receiver (2) or not (1), and (c) was part of a three-generation household (2) or not (1). Caregiver's age and sex (1 = male, 2 = female) were recorded, as were the care receiver's. The caregiver's socioeconomic status was indexed through the occupational status of the major breadwinner's occupation. The three categories were: (1) high — professional, managerial, (2) middle — sales, clerical, skilled, and (3) low — semi-skilled, unskilled.

Results: Dimensions of Appraisal

A 27×27 correlation matrix was analyzed using a principal components analysis (see Table 2). Using the scree test, six components were extracted, accounting for 50% of the variance in the appraisal domain. The solution was rotated, using both the varimax and oblimin procedures (SPSS* program). Given little difference in the degree of simple structure they produced, the orthogonal procedure was preferred.

The ratio of subjects to variables in this analysis satisfies Gorsuch's (1974) relatively liberal rule of thumb of 5:1, but not some of the more stringent criteria that have been proposed (Comrey, 1973). Nevertheless, as Gorsuch and others (Tabachnick & Fidell, 1983) point out, such ratios are only guides, since much depends on the reliability of the measures and the clarity of the underlying structure. Tabachnick & Fidell (1983) suggest that if the measures are reliable, a sample size of 100–200 subjects is likely to be sufficient for most purposes.

In this particular case, the sample size is sufficiently large to provide reliable correlation estimates, because the measures are not single attitude items, as is generally assumed when rules of thumb are given. In this study, the measures tend to be reliable multi-item scales. Comrey and Newmeyer (1965) have noted the advantages of using multi-item scales for obtaining a more stable factor structure.

This argument was supported empirically by diversifying the variable set that was being analyzed. The analysis was repeated on the 36 measures originally selected (4:1 ratio) and on a 23-variable set (6.3:1 ratio). A six-component solution was extracted and rotated in each case, producing substantively similar solutions. Having established robustness in this way, the 27-variable rotated solution was accepted as the optimal representation of the domain. Its advantage over the 23-variable solution is an interpretative one with the increase in items aiding factor interpretation (Gorsuch, 1974).

Component 1 represents the caregiver's perception of physical and task-oriented demands with strongest loadings for being aware of *physical degeneration* and providing *personal care, supervision, and decision making* for the care receiver. Also loading significantly on this factor is having no *informal backup*. Component 1 represents engagement in heavy "task load caregiving."

Component 2 is defined by four crises of decline variables: *emotional, social, and cognitive degeneration, caregiving unpreparedness, conflict* and a *history of conflict* with the care receiver, and *time constraints* through being enmeshed in caregiving and having no time for anything else. The crises of decline were accompanied by positive loadings on both coping scales, *seeking solutions* and *reinterpretation and acceptance*. Component 2 is labelled "dysfunctional caregiving."

Component 3 is defined by the personal resources of self-perceived *physical health, mastery* and *self-esteem*, low *emotionality*, and not relying on *reinterpretation and acceptance* as a coping strategy. Com-

Table 2. Variables With Loadings >.35 on Six Dimensions of Caregiving Appraisal

Appraisal Variables	1 Task Load Caregiving	2 Dysfunctional Caregiving	3 Inner Strength & Efficacy	4 Social Captivity	5 Intimacy & Love	6 Social Distance
Personal care	.80					
Supervision	.69					
Decision making	.67					
Physical degeneration	.38					
Informal backup	-.56					
Reinterpretation & acceptance		.44	-.36	.54		
Seeking solutions		.56		.43		
Sociability				.72		
Mastery			.78			
Self-esteem			.62	.37		
Emotionality			-.71			
Physical health			.56			
Reciprocity					.76	
Caregiver as confidant					.60	
Missing nothing					-.60	
Instrumental support					.53	
Conflict		.57				
Emotional, social & cognitive degeneration		.71				
Time constraints		.57				
History of conflict*		-.41				
Unpreparedness		.42				
Care receiver's confidants						.74
Care receiver's social support						.64
Confidants (caregiver)				.52		
Social support (caregiver)				.63		
Family's moral support						.50
Friend's moral support				.43		
Eigenvalue	3.37	2.73	2.50	1.84	1.61	1.52

Note. The cut-off for loadings was set at the higher than usual level of .35 because the size of the sample was not large.

*A high score indicates low conflict on this measure.

ponent 3 represents a "can do" appraisal, and is labeled "inner strength and efficacy."

Component 4 is dominated by personal and social resource variables. High scorers on Component 4 are likely to have high *sociability*, high *self-esteem*, high *social support*, a range of *confidants*, and *moral support from friends*. They are more likely to report using both coping strategies of *seeking solutions* and *reinterpretation and acceptance*. Component 4 is rejecting "social captivity" because of the combination of an outward social orientation with usage of the full range of coping strategies.

Component 5 represents the appraisal of caregiving as a mutually rewarding and shared experience. The positive social aspects of caring are reflected in loadings for feeling that the care receiver appreciates, values and is concerned about the caregiver (*reciprocity*), being the care receiver's confidant (*caregiver as confidant*), knowing that there would be things missed if caregiving ended (*missing nothing*), and having asked for and received help in the past (*instrumental support*). Component 5 is called "intimacy and love" in caregiving.

Component 6 represents "social distance" caregiving, the critical defining variables reflecting independence of care receivers. High scorers on this dimension observed that *care receiver social support*

was high and involved a number of *confidants*. Caregivers with high scores on this dimension reported high *moral support from family* for their efforts.

Results: Appraisal Dimensions With Outcomes and Background Variables

Pearson product moment correlation coefficients were calculated between the appraisal component scores and the outcome and background variables, except in the case of institutionalization. An independent *t*-test was used to compare care receivers who had been institutionalized with those who were still being cared for by the same caregiver at home.

From Table 3, neither "task load caregiving" (Component 1) nor "social distance caregiving" (Component 6) were related to the outcome variables. "Task load caregiving" was, however, strongly related to sociodemographic characteristics (see Table 4). Task demands were highest when a spouse was being cared for, when the caregiver was older, when the care receiver was male, and where caregiver and care receiver shared the same house.

"Dysfunctional caregiving" (Component 2) was not associated with any particular sociodemographic group (see Table 4), but it was strongly linked with negative caregiving outcomes. High scorers were

Table 3. Pearson Product Moment Correlation Coefficients Between the Appraisal Dimensions and the Outcome Variables

Appraisal Dimension	Negative Affect	Positive Affect	Psychological Well-Being	Minor Psychiatric Symptoms
1 Task load caregiving	.04	-.16	-.14	.06
2 Dysfunctional caregiving	.33**	.06	-.16	.20*
3 Inner strength and efficacy	-.43**	.22*	.41**	-.59**
4 Social captivity	-.07	.28**	.24**	-.05
5 Intimacy and love	-.24**	.20*	.28**	-.20*
6 Social distance	.03	-.01	-.04	.00

* $p < .05$; ** $p < .01$.

Table 4. Pearson Product Moment Correlation Coefficients Between the Sociodemographic Variables and the Appraisal Dimensions

Sociodemographic Variables	1 Task Load Caregiving	2 Dysfunctional Caregiving	3 Inner Strength & Efficacy	4 Social Captivity	5 Intimacy & Love	6 Social Distance
Spouse care	.28**	-.10	-.06	-.20*	.09	.00
Cohabitants	.23**	.06	-.09	-.11	.05	-.15
Three generations	-.16	.06	.01	.22**	-.16	-.06
Caregiver's age	.18*	-.06	.09	-.16	.08	.00
Caregiver's sex	.01	.12	-.05	.27**	-.09	.10
Care receiver's age	-.14	.16	.25**	.08	.00	-.02
Care receiver's sex	-.22*	.00	.08	-.09	.12	.06
Socioeconomic status	.09	.06	-.19*	.00	.12	.09

* $p < .05$; ** $p < .01$.

more likely to express negative affect and report minor psychiatric symptoms (see Table 3). This was also the only appraisal dimension that was related to institutionalization. Those involved in dysfunctional caregiving were more likely to have relinquished their caring role in favor of nursing home or hostel care two years after the interview ($t [78] = 2.18, p < .05$).

"Inner strength and efficacy" (Component 3) was positively correlated with the care receiver's age, and was more likely to be found among higher socioeconomic groups (see Table 4). Those who reported inner strength and efficacy were less likely to experience symptoms and negative affect, and were more likely to report positive affect and overall psychological well-being (see Table 3). No relationship was found with institutionalization.

"Social captivity" (Component 4) was characteristic of three-generation households, was less likely to occur in spouse caregiving situations, was more common among female caregivers (see Table 4), and was associated with high scores on positive affect and overall psychological well-being (see Table 3).

High scorers on intimacy and love (Component 5) were significantly less likely to express negative affect or report minor psychiatric symptoms, and were more likely to experience positive affect and overall psychological well-being (see Table 3). This appraisal was not typical of any particular sociodemographic group.

Discussion

The goal of this study has been to identify a set of appraisal dimensions that represent the critical care-

giving concepts that lie between stressors and outcomes, and thereby build on the work already undertaken by Lawton et al. (1989, 1991). The study identified four mainstream appraisal dimensions, all of which are substantially defined by perceptions of social relationships between caregiver and care receiver, between caregivers and others, or between care receivers and others. Lawton et al. (1989) hypothesized that the quality of the caregiver-care receiver relationship might be an additional dimension to emerge in future research. This study shows that the nature of this relationship, and of other social relationships surrounding the caregiving dyad, are of central importance and cut across all appraisal dimensions. This interconnectedness does not fit comfortably with stress frameworks that separate social resources from other stress constructs. The present study warns against such partitioning when the stressor is not an object or an experience, but is intricately tied to the existence of another person who is a central part of, and influence on, the individual's social life.

Three of the four mainstream appraisal dimensions identified in this study have parallels in the work of Lawton et al. (1989, 1991). "Dysfunctional caregiving" (Component 2) is similar to Lawton et al.'s burden dimension. Consistent with Lawton et al.'s analysis, those with high scores on dysfunctional caregiving did not see themselves as being in control of the situation, and they had low life satisfaction and poor mental health. Furthermore, the caregiver-care receiver relationship was a destructive one, and institutionalization occurred within two years. Lawton et al. (1989) describe burden as "a residual category of

subjective distress" (P62). This analysis adds a social dimension to this characterization, identifying a caregiving situation where (1) the care receiver has lost emotional and cognitive control, (2) the caregiver is using all coping strategies at her (his) disposal, (3) the caregiver and care receiver are in frequent conflict, and (4) the history of this relationship is one of the care receiver dominating and controlling the caregiver.

Whether or not this appraisal dimension is more common in caregiving contexts where cognitive impairment in the care receiver has been objectively assessed is a question for future research. Equally important is the question of a family history of dysfunctionality. Little is known of the quality of elder care in families where childrearing practices have been punitive and affectionless. Finding the answer to these questions has important policy implications. In many countries, nursing home admissions are dependent on high levels of objective disability rather than high levels of social need. If dysfunctional caregiving has its origins in social relationships rather than disability type, problems of elder abuse and caregiver breakdown may be slipping through the welfare net.

"Intimacy and love" (Component 5), like Lawton et al.'s (1989) caregiving satisfactions measure and Kinney and Stephen's (1989) uplift measure, has a strong focus on pleasure from the caregiver-care receiver relationship and from other family relationships. In caregiving dyads where intimacy and love were high and where the care receiver's family was caring and supportive, caregivers reported fewer symptoms of anxiety and depression, they experienced less negative affect and more positive affect, and their overall level of life satisfaction was higher. Intimacy and love, however, did not lower the risk of institutionalization. The value of this appraisal may be that it prevents the stress of caregiving from spreading and adversely affecting other areas of the caregiver's life, rather than prolonging the duration of home care.

"Intimacy and love" contrasts sharply with "dysfunctional caregiving," and it is tempting to see them as opposites rather than as independent dimensions. Parker (1978) argues that intimate relationships can be analyzed in terms of bonds of affection and domination, and that these styles of interacting are independent of each other. "Dysfunctional caregiving" is primarily concerned with a dominant care receiver losing control and a dominated caregiver needing to assume control. "Intimacy and love," in contrast, describes a caregiver-care receiver relationship of affection, shared confidences and mutually beneficial exchanges. There is no indication of who might be dominating whom.

"Social captivity" represents caregivers who have a sociable temperament and an active social life. They are most likely to be women with responsibility for caregiving to an older adult, a spouse, and children who are all part of the same household. This type of appraisal resembles Brody's (1981) description of "women in the middle." The fact that their caregiving is impacting on their social life is reflected in the degree to which they see coping strategies, both

emotional and problem-focused, as part of their caregiving repertoire. For this reason, "social captivity" is interpreted as the counterpart of Lawton et al.'s (1989) impact dimension.

High scorers on "social captivity" have high positive affect and overall life satisfaction, a somewhat surprising finding given that captivity has been linked with burden and institutionalization (Aneshensel et al., 1993). The findings should be interpreted with sensitivity to what is being measured. "Social captivity" takes its name from the fact that high scorers on this dimension are outgoing, well-networked people whose lifestyle is being affected by caregiving. Social captivity is the appraised threat rather than the experienced reality. The finding is consistent with Thompson et al.'s (1993) work showing that social interaction for fun and recreation is important in offsetting caregiving burden — more important, in fact, than either emotional or instrumental support.

"Social distance caregiving" had no counterpart in Lawton et al.'s (1989) study, and requires replication. Nevertheless, it is worthy of comment because it depicts a style of care that may emerge increasingly in the future. Caring with social distance may represent adaptation to the demands placed on families in an era when women are claiming their right to a life outside the home. Caregivers saw themselves as providing support to someone who had their own social network. It is important to note that there was no indication of interpersonal tensions underlying this mode of caregiving. The dominant message was social independence.

The remaining two dimensions to emerge in this study fall into the objective stressor-appraisal boundary and the resource domain. The least ambiguous was the resource dimension, "inner strength and efficacy," bringing together good physical health, mastery, self-esteem, and low emotionality — personal characteristics that have come to be associated with individual resiliency in many areas of stress research (Costa & McCrae, 1980; Crossman et al., 1981; Henderson et al., 1981; Holahan & Moos, 1985; Kobasa, 1979; Lazarus, DeLongis, Folkman, & Gruen, 1985; Levine et al., 1983; Pagel, Becker & Coppel, 1985; Wheaton, 1983).

Not so clear is the significance of "task load caregiving." The dimension would be expected to correlate highly with the objective stressors, and its independent status suggests that it could readily be grouped with these variables, even though the assessments rely on the reports of caregivers. Caution in doing so stems from the social demographic correlates of task load caregiving. Task load caregiving appears to be most characteristic of wives. On the stressor side of the argument, one might explain this finding as a consequence of spouses being more highly committed to providing home care than non-spouses (Horowitz, 1985; Montgomery & Kosloski, 1994; Pollitt et al., 1991). On the appraisal side of the argument, one might call on data showing spouse caregivers overestimating physical dependency and underestimating cognitive and emotional impair-

ment (DeBettignies et al., 1993; La Rue, Watson, & Plotkin, 1992; Pollitt et al., 1991).

The conceptualization of appraisal theoretically accommodates the idea of objective disability and work demands on the one hand, and subjective appraisals of disability and work demands on the other. Similarly, there is no conceptual difficulty in separating psychological resources of mastery and self-esteem from appraisals of caregiving mastery and self-worth as Lawton et al. (1989) would like to do. The problem is an empirical one that can only be answered through more systematic research: Are the objective and subjective counterparts of these concepts empirically separable, and if not, which offers most theoretical advantage in understanding caregiving stress?

Appraisal variables have frequently been conceptualized as mediating variables, but their moderating role should not be underestimated, particularly in the caregiving context, where temporal distinctiveness is difficult to ascertain. Of the appraisal dimensions identified in this study, two have a caregiving focus: "task load caregiving" and "dysfunctional caregiving." Three others focus on the supportiveness of social relationships between the caregiver and the care receiver ("intimacy and love"), of the caregiver ("social captivity"), and of the care receiver ("social distance"). An immediate research question is how do the appraisals of the giving of care interact with the appraisals of social supportiveness? Is the relationship between "dysfunctional caregiving" and outcomes less strong when the relationship is also characterized by "social distance"? Do increases in "task load caregiving" adversely affect outcome when "love and intimacy" is low or when "social captivity" is high? Approaching caregiving appraisal variables in this way may provide some insights into some perennial conflicting findings in the caregiving literature. A relationship between disability and stress has at times been confirmed (Deimling & Bass, 1986; Schulz, Tompkins, Wood, & Decker, 1987; Stoller & Pugliesi, 1989), but more commonly not (George & Gwyther, 1986; Haley, Levine, Brown, & Bartolucci, 1987; Kinney & Stephens, 1989; Moritz, Kasl, & Berkman, 1989; Morris et al., 1988; Pagel et al., 1985). Similarly, a positive relationship between caregiver and care receiver has been seen as beneficial (Gilleard, Gilleard, Gledhill, & Whittick, 1984; Horowitz, 1985; Morris et al., 1988; Pruchno et al., 1990; Whiteck, Hoyt, & Huck, 1994), and other times not (Cantor, 1983; Gilhooly, 1984; Jenkins, Parham, & Jenkins, 1985).

The most important substantive contribution of the present study is to demonstrate the integral role that social relationships play in understanding the stress process in caregiving. Segregating social variables as resources, or even as distinct appraisal variables, denies the way in which the social and instrumental aspects of caregiving are intertwined in the appraisals made by caregivers. At the same time, the findings sit comfortably alongside other work in this area. Apart from sharing common ground with Lawton et al.'s (1989) appraisal dimensions, the proposed

concepts are in many respects similar to Guest's (1986) facets of burden (Novak & Guest, 1989). At the very least, reducing possible appraisal variables to a limited set of key concepts provides economies in a field in which potential variables are numerous and the time of research subjects is precious. As a bonus, an analysis of appraisals in interaction with each other may provide much-needed insights into why so many of the findings in caregiving research are not reliably replicable from one research context to another.

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