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The Microstructure of Daily Role-Related Stress in Married Couples

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As large numbers of couples have adopted life-styles in which both members have jobs outside the home and share the work of parenting, there has been a corresponding increase in research on the effects of multiple role demands on psychological functioning. Nonetheless, even after a decade of research, we do not have a firm grasp of even the most fundamental issues, such as whether the participation of wives and mothers in the labor force promotes good or bad mental health among men and women in dual-earner families.

There are three positions on this issue, each supported by some evidence. The first is the role stress perspective, which argues that the combination of family and employment demands creates role overloads (more demands than one can handle) and role conflicts (the perception that role demands in one area affect the adequacy of one's role performance in another area). This increased exposure to stress is thought to create higher psychological distress among women in dual-earner cou-

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ples than in couples where the wife is a homemaker (Coser & Rokoff, 1971). Less has been written about the emotional effects of multiple roles on men, but the general position seems to be that they are less adversely affected than women (Cleary & Mechanic, 1983; Hohnhan & Gilbert, 1979).

The second position is the role expansion perspective, which argues that multiple roles in general have positive effects on health and well-being and consequently that the combination of family and work roles should be associated with improved mental health (Marks, 1977; Sieber, 1974; Thoits, 1983; Verbrugge, 1983). Although acknowledging that multiple roles increase exposure to role-related overloads and conflicts, role expansion theorists argue that the alternative resources provided by multiple roles outweigh these stresses and help dampen their emotional effects. Women employed outside the home have greater access to social support than homemakers. They have more control over personal finances. And their experiences in the labor force are thought to promote more positive feelings of self-esteem and personal control than homemakers typically have. All of these resources are known to play a part in helping ameliorate the effects of stress.

The third is the selection perspective, which argues that the association between multiple roles and emotional functioning is due to role incumbency being influenced by prior emotional characteristics or their determinants. This interpretation is not favored by anyone who does research on the influences of roles; rather, it is treated as a nuisance that must be rejected before getting on with the interesting analysis. In our view, most researchers are overly quick to dismiss selection as unimportant on the basis of fairly naive arguments, even though much of the evidence that has been offered in support of the role stress and role expansion perspectives is equally consistent with a selection argument. This position is discussed more fully by Kessler and McRae (1984).

The available evidence does not unequivocally support any one of these interpretations over the others. Almost all of this evidence comes from cross-sectional surveys of the general population. Among women, data of this sort show that employment outside the home is associated with somewhat better mental health than is homemaking, although this association is neither strong nor entirely consistent. The evidence on this point is reviewed by Mirowsky and Ross (1986). The data also show that mental health is somewhat worse among men whose wives are employed compared to the husbands of homemakers. This association is stronger among men with traditional sex role orientations (Kessler & McRae, 1982), though, and there is reason to believe that the association will disappear with time. Ross, Mirowsky, and Huber (1983) review the evidence on this point.

Survey data also show that children, particularly young children, are associated with worse mental health among the adults who raise them compared to married men and women who do not have children (McLanahan & Adams, 1987). This association is more pronounced among women than men, although it becomes stronger among men and weaker among women as the children get older (Cove & Geerken, 1977). The association among women, finally, seems to be more pronounced when they are employed outside the home (Cleary & Mechanic, 1983).

Because of these complex findings, it is naive to think that any single influence—role stress, role expansion, or selection—totally accounts for the relationship between roles and emotional functioning. The fact that women in the labor force are in better mental health than homemakers, for example, does not mean that there is nothing stressful about having a job outside the home. It means either that the good things about having a job outweigh the bad or that the determinants of female labor force participation are associated with good mental health. The critical issue for the debate, obviously, is to determine the relative contributions of role stresses, role resources, and selection processes to the observed relationships between roles and mental health. Unfortunately, there is no way that the typical study of this process—gross comparisons of psychological distress across different role statuses and combinations—can partition these three influences.

As an appreciation of this limitation has developed, researchers have moved beyond a focus on role status *per se* to an analysis of specific characteristics of roles that might be associated with emotional adjustment. Baruch and Barnett (1986), for example, have shown that individuals' assessments of the rewarding and distressing aspects of their various roles relate more strongly to psychological well-being than having the roles themselves. The obvious problem with this approach is that these assessments are subjective perceptions that may be confounded with the psychological outcomes they are intended to explain.

Some efforts have been made to develop more objective survey-based measures of role experiences (Pearlin & Schooler, 1978). Analyses making use of these measures show that chronic role-related stresses are much more important than the roles themselves in explaining the distribution of emotional distress (Pearlin, 1983). Even with more objective measures, though, causal ambiguity still exists. Does chronic marital conflict, for example, cause depression? Or is it chronic depression that brings about marital conflict? Conventional survey data provide no way of distinguishing between these two possibilities nor of estimating their relative contributions to the overall association between marital conflict and depression.

In this chapter, we describe a program of research designed to deal

more effectively with these problems of causal interpretation by using daily diaries to focus on the level of analysis where chronic stress is manifest—in day-to-day events and activities. As such, this work can be seen as part of a growing tradition of research using daily diaries to study chronic stress (e.g., DeLongis, Coyne, Dakof, Folkman, & Lazarus, 1982; Eckenrode, 1984; Stone & Neale, 1982). Diaries provide more concrete and reliable information about the actual experience of stress in a role than can be obtained in a conventional survey. Rather than ask the respondent to provide a summary assessment of how often he fights with his wife, for example, we can calculate an actual count of daily arguments over a period of time. Furthermore, because diaries record day-to-day variations in stress and mood, they make it possible to study the dynamics of stress in role situations that appear static in more highly aggregated cross-sectional surveys. In this way we can directly address the problem of causal confounding that has proved to be so intractable in the past. Finally, because daily diaries permit one to examine multiple role stresses within individuals over time, findings based on diary data are relatively immune to selection effects (Kessler, 1987). Therefore, in discussing many of the findings we can restrict ourselves to the relative merits of the role stress versus the role expansion perspectives.

Our analysis begins with a discussion of the relationship between multiple roles and the prevalence of various role-related daily stresses, focusing particularly on the effects of the wife's employment status and the presence of children in the home. Next, we evaluate whether these role statuses buffer or exacerbate the effects of daily stresses on mood in ways that are predictable from the theoretical positions outlined here. Having traced these links between roles and daily stresses, we then turn to exclusively daily-level analyses to see whether, within any given role, various combinations of daily stresses at home and at work have effects that conform to theoretical predictions. Finally, we use the diary data to provide direct empirical evidence on what is thought to be a key source of multiple role stress: the spillover of stresses between work and family roles.

THE STUDY DESIGN

Respondents were men and women in 166 married couples, volunteers from a larger sample of 778 white couples in the Detroit metropolitan area who participated in a community survey about marital stress and coping. Respondents in the diary study were asked to complete a short diary on each of 42 consecutive days (6 weeks). Respondents were

not paid for their participation, although a \$5 gift was sent along with the first diary booklet. Seventy-four percent of those who agreed to participate in the diary phase of the study completed the full set of 42 diary days. Just under 90% completed 28 days.

Table 1 presents descriptive information on the diary sample as well as on the respondents from the larger survey who did not participate in the diary study. Couples in the diary sample had an average of 2.5 children, and their average family income was almost \$43,000. Husbands were slightly older than wives (43.3 vs. 40.5 years) and had slightly higher levels of education (13.7 vs. 13.3 years). Nearly 90% of husbands were employed compared to 61% of wives. Approximately half of the sample were Protestant, and another 40% were Catholic.

A comparison of the diary and nondiary subsamples shows that these are similar on most of the characteristics considered here. Exceptions are education and employment status: Husbands in the diary sam-

Table 1. Comparison of Diary Respondents with Other Respondents in the Baseline Survey

	Diary subsample (n = 166)		Other respondents (n = 612)		Mean difference (a - b)	p
	\bar{X}	s.d.	\bar{X}	s.d.		
Couple characteristics						
Number of children	2.5	1.8	2.5	1.8	0.0	.85
Family income (dollars)	42,800	19,800	41,600	20,600	1,200	.52
Husband characteristics						
Age (years)	43.3	12.2	43.5	13.0	-0.3	.83
Education (years)	13.7	2.5	13.3	2.7	0.4	.06
Employed (%)	89.8	30.3	84.1	36.6	5.7	.07
Religion						
Protestant (%)	46.4	49.9	44.8	49.7	1.6	.71
Catholic (%)	39.8	48.9	39.5	48.9	0.3	.94
Other (%)	13.8	34.5	15.7	36.4	-1.9	.55
Wife characteristics						
Age (years)	40.5	11.7	40.9	12.3	-0.4	.67
Education (years)	13.4	2.0	13.1	2.1	0.3	.25
Employed (%)	60.8	48.8	56.1	49.7	5.7	.10
Religion						
Protestant (%)	49.4	50.0	48.7	50.0	0.7	.87
Catholic (%)	43.4	49.6	41.2	49.2	2.2	.61
Other (%)	7.2	25.8	10.1	30.1	-2.9	.26

ple had slightly higher levels of education (.4 of a year), and they were more likely to be employed (90% vs. 84%); wives were also more likely to be employed (61% vs. 55%).

The diary contained a wide range of questions, but only two of these are considered in this chapter. The first is a checklist of 24 stresses that occurred over the past 24 hours. We consider seven of these stresses here. Two involve overloads, "a lot of work" at home or on the job. The other five involve interpersonal stresses, "tensions or arguments with" one's spouse, children, supervisor at work, co-workers, or work subordinates. On the basis of preliminary analyses, the three interpersonal work stresses were combined into a single measure.

The second diary measure considered in this chapter is an inventory of daily mood. This inventory includes 18 items based on the Affects Balance Scale (Derogatis, 1975) subscales of anxiety (e.g., nervous, tense, afraid), hostility (e.g., irritable, angry, resentful), and depression (e.g., helpless, worthless, depressed). Respondents were asked to rate "the number that best describes your feelings during the past 24 hours" on a 4-point scale ranging from "Not at All" to "A Lot." Responses to all 18 items were combined to create a scale of distressed mood. The alpha reliability of this scale is .91 among men and .92 among women. Consistent with prior research on gender differences, women report significantly more distress than men.

THE PREVALENCE OF DAILY ROLE STRESS

One point of agreement among virtually all writers on the topic is that multiple roles are associated with increased stress. Even advocates of the role expansion perspective grant this point. This could occur because multiple roles cause overloads and conflicts or because of selection. An example of the former would be the conflicting demands of family and work creating marital conflict between an employed woman and her husband. An example of the latter would be a woman taking a job outside the home as a way of coping with a conflictual marriage.

Several analyses have been carried out to study the relationship between roles and role stress in cross-sectional survey data, and the results are generally consistent with the view that multiple roles are associated with increased role stress. See Thoits (1987) and Emmons, Biernat, Tiedje, Lang, and Wortman (Chapter 4 this volume) for reviews. As noted, though, many of these studies use subjective measures, whereas others rely on retrospective reports about the frequency of particular stressors over a period of time. Our data help resolve these

problems by obtaining concrete information about role-related stressors on a daily basis over a period of several weeks. This makes it possible to aggregate daily reports to arrive at more accurate prevalence estimates.

Based on the role stress perspective, at least three predictions can be made about how roles and role-related daily stresses should covary in the diary data. The first is that role stress of all kinds will be more common in couples where the wife is in the labor force rather than a homemaker. As noted earlier, the available evidence suggests that female labor force participation has a more negative emotional effect on husbands than wives, so a related prediction is that stress increases more for men than women when the wife has a job outside the home.

The diary data partially support these predictions. There are eight daily stresses (family and job overloads among men; family overloads among women; spouse, child, and job arguments among men; and spouse and child arguments among women) that can be compared across couples who differ in the wife's labor force participation. Three of these are more prevalent in dual-earner couples: family overloads among men and spouse arguments among both men and women. A fourth, job arguments among men, is significantly less prevalent among the husbands of women in the labor force than the husbands of homemakers. These results are presented in Table 2. (Note that the statistical tests in Table 2 assess the generalizability of our findings to the population of *person-days* associated with the persons in our sample; they do not assess generalizability to the population of *persons* from which our sample was drawn [see Cohen & Cohen, 1983, Chapter 1].)

It is particularly important that there is no relationship between female labor force participation and overloads at home among women because this stress has been thought to increase considerably when a married woman takes a job outside the home. (See Emmons *et al.*, Chapter 4 this volume.) The absence of this relationship could help explain why most surveys find labor force participation to be associated with somewhat better mental health among married women rather than the somewhat worse mental health predicted by the role stress perspective.

It is also important to note that the family overloads reported by husbands in dual-earner couples are greater than those found among the husbands of homemakers. This could help account for the association of wives' employment with worse mental health among their husbands.

It is not clear how to interpret the one significant association in the opposite direction from the prediction, that husbands of women in the labor force report comparatively few job arguments. It might be that multiple roles are health promoting in this case, in that men in dual-

	Role status				Tests of significance	
	Wife employed		Wife homemaker		Wife's work status (t)	Parental status (t)
	No children at home	≥1 child at home	No children at home	≥1 child at home		
A. Husbands	Percentage of days	Percentage of days	Percentage of days	Percentage of days		
Home						
Role overload	22.1	25.9	15.4	22.7	3.30***	3.66***
Argument with spouse	6.0	5.3	2.7	5.0	1.60	0.26
Argument with child	—	5.7	—	5.9	-0.16	—
Work						
Role overload	34.6	35.5	26.7	36.5	0.79	2.51*
Argument	3.3	2.5	1.3	5.0	-2.85**	0.88
n (days)	1,036	2,282	371	1,505		
B. Wives						
Home						
Role overload	23.0	37.3	26.8	36.4	-0.12	8.39***
Argument with spouse	6.0	6.6	2.9	5.5	2.31*	1.61
Argument with child	—	10.3	—	11.4	-0.92	—
Work						
Role overload	30.9	32.4	—	—	—	0.78
Argument	4.0	1.3	—	—	—	-5.56***
n (days)	910	2,408	385	1,491		

* $p < .05$; ** $p < .01$; *** $p < .001$.

earner couples experience less pressure to compete at work because they are not shouldering the total responsibility for family financial maintenance (Pleck, 1985).

A second prediction about the relationship between roles and the prevalence of daily role stress is that this stress will be more common in couples with children. The available evidence shows that children are more strongly associated with distress among mothers than fathers, so a related prediction is that the prevalence of role stress increases more for women than men when there is a child in the home.

The data are partly consistent with these predictions. Of eight role stress measures that could be compared across couples who differ in the presence of children (family and job overloads and arguments among both men and women), three are significantly more prevalent in couples with a child, and two of these are found among men rather than women: family overloads (both sexes) and job overloads among men. As shown in Table 2, four of the five remaining stresses are unrelated to the presence of children in the home, whereas arguments at work are significantly less common among women if they have children at home.

It is noteworthy that family overload is the stress thought to be most strongly affected by the presence of children. The fact that this stress is significantly related to children among both men and women is consistent with this thinking. Furthermore, family overloads are more prevalent among women than men in comparison to couples without children in the home. This, too, is consistent with the prediction.

It is less clear how to interpret the findings that children are associated with increased job stress (overload) among fathers and decreased job stress (arguments) among mothers. Most theories of role stress would predict that job stress would increase more among women than men (Coser & Rokoff, 1971). It is, of course, possible to offer *post hoc* interpretations (e.g., increased overload among fathers could be due to their trying harder to get ahead than they would if they did not have children; women with children at home might select less challenging jobs or invest themselves less in their jobs, either of which might decrease their exposure to arguments at work).

An important implication of these results is that the stronger association between children and emotional distress that surveys typically find among women than men is probably not due to a greater increase in chronic role stresses among women. Our data show that mothers experience more family overloads than men, but we also find that job overloads are more prevalent among fathers. These differential prevalences add up to roughly equal exposures to excess stress for men and women. Furthermore, women in the labor force experience at least one kind of

job stress (arguments) less often than other women, whereas there is no comparable benefit associated with children among men. On the basis of these considerations alone, we would expect the distress of fathers to increase more than that of mothers when a child is added to the family. The fact that the opposite occurs argues that differential exposure to role stress is probably not the fundamental intervening link between children and higher psychological distress among women.

A third prediction consistent with prior literature is that role stress will be particularly high in couples where there are children and the mother works outside the home (Holahan & Gilbert, 1979). On the basis of available survey data, we would also predict that this interactive effect is considerably stronger among women than men.

There is absolutely no support for these predictions in the diary data. We evaluated four stresses (family overloads and spouse arguments reported by both men and women). Regression equations were estimated in which dummy variables for wife labor force participation, the presence of children, and the interaction between these two variables were used to predict prevalence of role stress. In no case was there a significant interaction. It is particularly important that we failed to find interactive effects among women, for role stress theory clearly predicts that they should exist. This offers another basis of support for the conclusion that differential exposure to role stress does not explain the relationship between multiple roles and psychological distress among women.

THE STRESS-BUFFERING EFFECTS OF MULTIPLE ROLES

A central issue in the debate between the role stress and role expansion perspectives involves emotional reactivity to role-related stress. The role stress perspective predicts that role stresses will be more emotionally damaging to people who have multiple roles. Overloads at home, for example, are predicted to be more distressing to women in the labor force than to homemakers because of the conflicts they create between the competing demands of family and job (Coser & Rokoff, 1971; Gove & Tudor, 1973). The role expansion perspective makes exactly the opposite prediction—that the greater social and emotional resources available to women in the labor force allow them to cope more effectively with family overloads than homemakers (Thoits, 1983).

Cross-sectional evidence on this issue is consistent with the role expansion perspective. Marital stress, for example, has been shown to be more strongly related to emotional functioning among homemakers

than among women in the labor force (Veroff, Douvan, & Kulka, 1981). Nevertheless, as we noted earlier, this finding lends itself to multiple interpretations. It could be that employment helps buffer the effects of marital difficulties on psychological distress. It is equally plausible, though, that selection explains the association. This could happen if stress reactivity increased the likelihood of women becoming homemakers rather than seeking employment outside the home.

The diary method provides a unique opportunity to see whether the role stress perspective is consistent with more dynamic data linking role stress and emotional functioning. Our approach to this test was to use time series models of the relationship between daily variations in role stress and mood to evaluate whether emotional reactivity to daily stress differs among people who have different roles. The implications of this approach for the control of selection effects is discussed by Kessler (1987).

The analyses we have carried out so far make use of fairly simple time series models of the general form

$$\Delta DM_{it} = b_0 + b_1 S_{it} + b_2 FS_{it} + b_3 C_{it} \quad (1)$$

where the outcome ΔDM_{it} refers to the difference between the daily mood of person i on day t and his or her average mood across all diary days, and the predictors include job stress (S) and family stress (FS) on the same day, as well as controls (C) for confounding variables that differ across time (for example, day of the week). The b_1 and b_2 coefficients in these models are interpreted as the effects of role-related stress on daily mood. Using the residual score as an outcome results in a pooled within-person analysis; this effectively controls for the additive effects of any confounding variables that vary across individuals (e.g., age or education).

These sorts of models were estimated separately in four subsamples of couples in which the wife was either employed 20+ hours a week (referred to subsequently as women in the labor force) versus either a homemaker or employed less than 20 hours a week (both of whom are referred to here as homemakers) and couples in which there was either one or more children living at home or no children at home. The cross-classification of these two dichotomies yields four types of couples. Although admittedly coarse, this typology provides a useful way of obtaining preliminary information about the structure of stress reactivity in the data.

The results of the subgroup time series analyses rather dramatically disconfirm both sets of predictions among women. All five of the stresses

considered (overloads at home and work, arguments with spouse, child, and co-workers) significantly increase distress on the day they occur, yet there is no evidence that these effects vary depending on whether the woman is in the labor force or not, has a child at home or not, or is in any combination of these two roles. In particular, the data fail to document either of the two moderating effects most widely discussed by advocates of the two perspectives. Contrary to the prediction of role stress theory, the impact of job stress on mood is not greater among women with children at home than among those without children. This is consistent with cross-sectional evidence reported by Baruch and Barnett (1986). Contrary to the prediction of the role expansion theory, the impact of family stress is no weaker among women in the labor force than among homemakers.

An important implication of these results is that the better mental health of women in the labor force compared to homemakers typically found in general population surveys is not due to coping resources that help these women reduce the emotional distress otherwise associated with role-related stress. Indeed, if we combine our results on differential exposure to daily stress (which shows women in the labor force to experience more spouse arguments) with the finding that stress reactivity does not vary by labor force status, we would predict that women in the labor force would be in worse mental health than homemakers. The opposite is true, though, in our data.

Neither the role stress or role expansion perspective has as much to say about the relationship between roles and stress reactivity among men. Interestingly, though, our data show that family roles influence reactions to stress among men much more than among women. Consistent with the role stress perspective, the emotional effects of family role stress (both overloads and arguments) are significantly greater among the husbands of women in the labor force than the husbands of homemakers. With respect to the effects of job stress, though, just the opposite is true. The husbands of women in the labor force are significantly less affected by these stresses than the husbands of homemakers.

It is likely that a complex combination of influences is involved in these different interactions. Greater demands on the husband for time and energy around the house could be responsible for the greater distress associated with family overloads among the husbands of women in the labor force. This is unlikely to account, though, for the greater distress created by spouse arguments. A more plausible interpretation is that an argument with one's wife is more upsetting in dual-earner marriages because the wife has more marital power. This possibility has been hypothesized by Burke and Weir (1976), although it has not been tested

empirically. We have some ability to make such a test in future analyses by making use of data obtained in our baseline survey about marital power and spouse conflict resolution styles.

The opposite sign interactions involving the effects of job stress might be due to the protective effects of multiple roles. The most likely possibility of this sort is that men have more access to support from their wives if labor force participation among these wives allows them to empathize more deeply with their husbands' problems at work (Simpson & England, 1981). This more effective support could help reduce the emotional effects of job stress. An alternative interpretation is that job problems are less upsetting because dual-earner couples have more financial resources and breadth of earning capacity, which help protect the husband from the anxieties associated with work stress (Pleck, 1985).

These results begin to uncover the kinds of complexities that we had envisioned when we first began this line of investigation—a variety of different positive and negative implications of each role combination that produce an aggregate association with psychological functioning that depends on the relative prevalence and power of countervailing forces. We have not yet taken the next step of rigorously decomposing the relationships between roles and distress in terms of exposure and reactivity to daily stress to see whether these influences can explain the aggregate relationships, but the preliminary results presented here provide some clues about what we might expect to find when we do this. We return to this issue in the discussion section.

THE STRESS-POTENTIATING EFFECTS OF MULTIPLE DAILY STRESSES

Before dismissing entirely the possibility that particular combinations of family and employment roles are associated with differences in stress reactivity among women, we considered another possibility. This involved multiple stresses that occur on the same day. One role stress perspective, explicitly, role conflict, predicts that the conflicting demands of the two roles create a stress that is greater than the sum of its parts (Coser & Rokoff, 1971). We broadened this prediction somewhat and searched for interactions between any two daily stresses that occurred on the same day in the job and the family domains. We reasoned that arguments at work on a particular day might make it particularly difficult to cope with arguments at home at the end of the day and that other kinds of simultaneous stresses (for example, overloads at work followed by spouse arguments at home) might create a synergistic effect

that promotes particularly high distress. (See also the chapters by Pearlin and McCall [Chapter 3] and by Weiss [Chapter 2] in this volume.)

We investigated this possibility by creating time series models to predict daily mood that included as predictors interaction terms between pairs of daily stresses. Our working hypothesis was that these interaction terms would have positive signs and be significantly different from zero—indicating that the overload and conflict created by the occurrence of stress in two role domains has an emotional effect over and above the effects of the component stresses.

This turned out not to be the case. None of the interactions we examined, either among men or women, was both positive and significant. In particular, the interaction predicted by the role stress perspective between overload at home and overload at work was virtually zero among both men and women. This result calls into question the importance placed on role conflict in theories of role stress.

At the same time, a significant negative interaction was found among both men and women involving arguments at work and at home. The distress found among men and women who experienced these two stresses on the same day was less than we would have predicted on the basis of an additive model. This could reflect the possibility that the distress created by arguments at work is to some extent dissipated by taking it out on one's spouse or child later in the day. Or it could be explained by the work argument preparing the person to cope more effectively with the subsequent argument at home.

One attractive feature of the diary data is that we have the capacity to investigate these speculations directly. For example, the dissipation interpretation suggests that some people pick a fight with their spouse or child as a way of coping with the emotions created by work arguments. If this interpretation is correct, we would expect to find that job arguments predict subsequent family arguments in daily time series analyses and that this is more true for persons who use displacement as a coping strategy. We can carry out analyses to see whether these predictions hold up in the data, using within-person time series to study variation in the relationship between work arguments and subsequent home arguments and using data on coping styles obtained in the baseline interview to link this variation to broader coping styles that involve displacement. Analyses of this sort are currently underway.

The argument that arousal increases coping effectiveness can be evaluated in a similar way. We obtained data in the diary about patterns of coping with daily stress, and we can see whether the coping strategies used in spouse arguments differ on days that vary in whether or not there was an argument at work.

Irrespective of the resolution of this interpretive uncertainty, the existence of significant negative interactions is consistent with the role expansion perspective. Indeed, one proponent of this perspective explicitly predicted the existence of a negative interaction of precisely this sort and offered the arousal interpretation in support of the prediction (Marks, 1977). Clearly, we need to examine the mechanisms involved in this interaction more carefully in future analyses. We also need to take it into consideration in subsequent analyses of differential exposure and reactivity to daily role-related stress. The interaction shows that the greater exposure to multiple daily stresses that is found among people with multiple roles is, to some degree, counteracted by reduced stress reactivity.

STRESS SPILLOVER

In the last section, we speculated that arguments at work might trigger subsequent arguments at home. This process is an example of an emotional contagion that has been called stress "spillover" in the literature on multiple roles (Crouter, 1984; Staines, 1980). It is widely believed by advocates of the role stress perspective that this kind of spillover helps explain why people with multiple roles experience more role stress. To date, though, evidence presented in support of the notion that stress spillover occurs across employment and home roles has been largely indirect and qualitative (McDermid & Crouter, 1986; Pearlin & McCall, Chapter 3 this volume; Weiss, Chapter 2 this volume).

The diary data provide an opportunity to obtain more direct evidence. Researchers who have studied job-family linkages (e.g., Billings & Moos, 1982) have presumed that spillover operates at the level of daily stress—a problem at work creating problems at home the same night or problems at home leading to difficulties at work the next day, but they have not tested this presumption. Unlike previous cross-sectional analyses, we can see whether this kind of process occurs by means of time series analysis of daily stress and mood. The analysis we used is a fairly simple one that has many features in common with the kinds of models used earlier to study the effects of stress on mood. In this case, we studied whether stress in one role predicts subsequent stress in another role.

The results consistently document significant spillover effects among both men and women. These effects are bidirectional, with stresses at home spilling over into the employment role and stresses on the job spilling over into the family. Overloads on the job, for example,

predict a significant increase in home overloads the same evening. Arguments at work predict an increased probability of arguing with one's spouse at home the same evening. Overloads at home, in turn, are associated with a significant increase in the probability of overload at work the next day, whereas arguments at home predict subsequent arguments at work. Even though there are some small differences in the spillover effects that we find among men and women, the overall consistency in the broad patterns is striking. These results contradict the claims of Pleck (1977) on the differential permeability of the job-family boundary for husbands and wives. He argues that job-to-family spillover is more likely for husbands, whereas family-to-job spillover is more likely for wives. No such differences are evident using our direct measures of spillover.

The results also help us interpret some of the aggregate patterns described earlier. The high prevalence of spouse arguments in couples where the wife is in the labor force, for example, can be explained by the fact that job arguments often spill over to create arguments at home. Similarly, the higher prevalence of job overloads in couples with children at home can be explained by the joint effects of children on home overloads and of home overloads on subsequent job overloads.

There are other aggregate patterns, however, that the time series analysis shows to be unrelated to spillover. One of these is the high prevalence of job overloads among the husbands of homemakers with children at home. We find no evidence that spillover of home stress can account for why these men have so many overloads at work. Some other processes are apparently involved.

Nor can the results involving spillover explain why mothers have significantly fewer job arguments than other women in the labor force. Indeed, we find that arguments between mother and child significantly increase the risk of subsequent arguments at work. This means that, all else equal, we would expect women with children at home to report more, rather than fewer, arguments at work. Apparently, something we have not considered is negating this spillover effect from family to work. Further analysis might show that selection is involved.

Despite these two patterns that cannot be attributed to spillover, the overall evidence for its existence is much more powerful and pervasive than previous arguments have suggested. In many cases, we find that stress in one role more than doubles the risk of a subsequent stress in the other role. Effects as large as this can totally explain role-based variation in the aggregate prevalence of most of the daily stresses we examined.

An important task for future research will be to begin tracing the magnitude and determinants of variation in spillover. In the last section

we speculated about the processes involved in a spillover of job arguments to family arguments, and we discussed some analysis strategies for investigating which of these processes is actually at work. Theoretical work of this sort is underway (see Pearlin and McCall, Chapter 3 this volume, and Weiss, Chapter 2 this volume). This theoretical work will need to be linked with careful empirical work in larger, more representative populations.

DISCUSSION

At the beginning of this chapter we described some of the relationships between social roles and psychological functioning that others have documented in general population surveys. Distress is somewhat higher among homemakers than women in the labor force, but lower among the husbands of homemakers than the husbands of women in the labor force. The presence of children in the home is associated with increased distress, particularly among employed women. We also described two theoretical perspectives that have attempted to make sense of these associations. The first perspective emphasizes the health-damaging effects of multiple roles, the other their health-promoting effects. We began our work on the assumption that both influences are at work. We also assumed that social selection factors are probably of some importance and that the aggregate patterns found in previous survey research reflect a complex balance of these different countervailing forces.

Any attempt to disentangle these influences with conventional cross-sectional survey data is likely to be inadequate to the task, even though considerable progress has been made in recent years in measuring and evaluating the effects of the experience of particular roles. We consequently turned to a disaggregated analysis of role-related micro-stressors. The preliminary analyses presented in this chapter support our belief that scientific understanding of the relationship between multiple roles and psychological functioning can be advanced in this way. Even though these results represent only the most preliminary work on an enormously complex data array, they already demonstrate the enormous power of this method to look inside a situation that is usually considered static and chronic to uncover its dynamic characteristics.

These analyses show that the processes linking roles to psychological distress are considerably more complex than suggested by the role stress and role expansion perspectives. Combining employment and family roles has been shown to have both positive and negative effects for both

men and women. Support for the role stress perspective was found in the observations that combinations of roles are significantly associated with the prevalence of some daily stresses and that stress spillover effects between job and home are pervasive. The greater emotional effects of family stress on the husbands of women in the labor force compared to the husbands of homemakers is also consistent with this perspective. At the same time, we found support for the role expansion perspective in the finding that the husbands of women in the labor force are buffered from the distress otherwise associated with job stress as well as in the finding of a consistent negative interaction between arguments at work and at home on the same day in predicting distress.

We also found some results that contradict central assumptions of the two perspectives. Regarding the role stress perspective, there is no evidence, for example, that women in the labor force experience family overloads more often than homemakers. Nor could we find any evidence to suggest that the occurrence of stress at work and stress at home on the same day leads to more psychological distress than predicted on the basis of an additive model. This calls into question the importance of role conflict, which is a central concept in the role stress perspective. Our disaggregated time series analyses also failed to find any evidence among women that certain combinations of roles are associated with reactivity to stress. This calls into question a basic aspect of the role expansion perspective, which argues that women in the labor force are better able to cope with stress because of the social and emotional resources provided by employment outside the home.

These findings point to the need for more thorough analyses along several lines. For example, the analyses we have carried out up to now have not examined fine-grained aspects of roles—such as whether children are preschoolers or school age, whether or not the mother has outside help with housework and child care, the extent to which the husband has an egalitarian sex role orientation or helps around the house, and a wide range of other differences between couples that may affect exposure to stress and stress reactivity. Nor have we yet examined the full range of daily stresses that are linked to family and employed roles or the processes of coping associated with them when they occur. These extensions will almost certainly help to clarify some of the obscure aspects of the results found so far.

It is difficult to draw any firm conclusions from this complex array of findings, especially as we have not yet attempted to integrate them into a comprehensive model of the relationship between social roles and distress. Nonetheless, two broad conclusions seem to be warranted as a way of directing subsequent research efforts.

The first of these is that the roles occupied by married women are more strongly associated with the psychological functioning of their husbands than of the women themselves. Given that previous research on changing gender roles has concentrated on women to the neglect of men, this result suggests that such an emphasis has been misleading and that serious effort is needed to understand the ways changing female roles affect the lives and attitudes of men. As the chapter by Weiss in this volume makes clear, much of the daily interaction between husbands and wives, even among dual-earner couples, appears to be directed toward minimizing the psychological distress of the husband, often to the neglect of the wife. Thus, husbands in dual-earner families may perceive their wives' employment as a direct threat to their emotional security.

The second conclusion is that daily stress does not seem to play a major part in mediating the aggregate relationship between multiple roles and distress among women. We can see this in the finding that the distress of women in the labor force is lower than that of homemakers despite the fact that women in the labor force are exposed to more daily stress and appear to have no advantage in stress reactivity.

This observation raises the possibility that either selection or stable characteristics of role situations explain the aggregate patterns found among women. We hope that some insights into these different possibilities will be obtained with future analyses making use of information about role experiences obtained in our baseline survey.

As we have been working with these data for only 3 months, we are painfully aware of the fact that we have many more questions than answers. Nonetheless, the results we have been able to obtain in this short time encourage us in thinking that an analysis of day-to-day experiences in roles will eventually increase our understanding of emotional reactions to the enormous changes in family and employment roles that are occurring in contemporary society.

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