They are proud of the way they have put their lives together to meet as many of their goals as possible-- although they are aware that they had to work very hard to do so.

The fact that stress has a detrimental effect on health and well-being is well-documented, although the complex relationships are far from delineated. One major controversy involves whether women's traditional roles or the higher status professional and leadership positions, held predominantly by men, are more stressful for women. Although some argue that women will suffer more stress-related disorders as they move into high pressure jobs or as they combine work and family roles, the preponderance of data show that women are least healthy when they hold traditional family roles alone (see Barnett & Hyde, 2001). Even so, the same work environment can be more detrimental for women than for men if the expectations of that environment are structured more appropriately for men than for women (see Gerdes, 1995). Higher education is just such a traditionally male environment; and it is an important environment to examine because of the increasing presence of women as faculty and administrators, and because higher education itself is more than a venue for women's leadership and success. Institutions of higher learning prepare the men and women who become leaders across our society, and higher education arguably represents a society's highest potential for "preserving, transmitting and enlarging on what is best in the culture" (Farley, 1990, p. 194).

Although the representation of women in American academe has increased continuously and cumulatively since the early 1970s, when affirmative action first applied to higher education, the situation of women may not be as much improved as we would like to believe (see, for example, Glazer-Raymo's Shattering the
Myths: Women in Academe, 1999). The growth in numbers of women has been very gradual and has arisen primarily from growth in the overall numbers of professional higher education employees (a 50% increase between 1976 and 1995), with a higher rate of increase for women than for men, resulting in women reaching 35% of full-time faculty and 44% of full-time administrators by 1995. Women continue to be underrepresented in traditionally male fields, the upper ranks of faculty and administrators, and more prestigious institutions (Billard, 1994; Glazer-Raymo, 1999; National Center for Education Statistics [NCES], 1998; Valian, 1998). Women also are disproportionately overrepresented in part-time positions and continue to earn less than men in comparable situations (Billard, 1994; Glazer-Raymo, 1999; NCES, 1998; Ransom & Megdal, 1993; Valian, 1998).

Women's own experience of their situation is a more important determinant of their well-being than is their increased representation. Unfortunately, the "chilly climate" concept (Sandler, 1986) remains a familiar depiction of structural and attitudinal constraints impeding women's progress in academe. Recent empirical studies demonstrate that women do perceive at least some aspects of the academic climate as chilly to their success (Bronstein & Farnsworth, 1998). Women's nontraditional status in academe is related to potential sources of extra stress that a number of authors have described-- above and beyond the multiple job responsibilities and time pressures that apply to all academics. In addition to the objective disadvantages in positions and pay listed above, women are considered likely to be stressed by subtle discrimination, outsider status, high demands for service activities, isolation and lack of social support, responsibility for household work and child care, expectations that a spouse's career comes first, and coincidence of prime childbearing years with pre-tenure evaluations (Lease, 1999; O'Laughlin & Bischoff, 2001; Tack & Patitu, 1992). These factors would affect women administrators who begin as faculty members as well as women who remain in the faculty; both groups may discover that the independence and flexibility of a faculty career have the downsides of poorly defined expectations and "spillover" between career and the rest of one's life (see O'Laughlin & Bischoff, 2001).

However, surprisingly few empirical studies of faculty and administrators include consideration of gender and report respondents' experiences of conflicts with other roles as well as work stress per se. Using standardized questionnaires, Lease (1999) found no gender differences in faculty members' ratings of work-role stressors; but women did report more responsibility for home tasks, and those faculty members who reported responsibility for more than 50% of home tasks also reported more interpersonal strain. In a much larger study, Dey (1994) included outside roles in analyzing 1989-90 data on 18 sources of stress from the Higher Education Research Institute (HERI) standardized survey of faculty and administrators teaching at almost 400 institutions. Time pressures and lack of personal time received the highest ratings as stress sources with more women than men using the highest rating, extensive. From 39% to more than 50% of women in each group (grouped according to white versus non-white and tenured versus untenured status) rated these two sources of stress as extensive. Although the level of extensive stress was lower for other sources of stress, women also were more likely than men to report extensive stress from subtle discrimination and from
managing household responsibilities. Among tenured faculty, more women than men rated the teaching load and the review/promotion process as extensive sources of stress (the review/promotion process was rated as more stressful by untenured faculty but without a gender difference). Furthermore, the 18 sources of stress had different interrelationships for women than for men. Dey (1994) concluded that the populations warranted separate investigations and that future researchers should explore additional stressors of particular relevance for different groups.

Standardized surveys with closed choices do not allow academic women to identify the stressors and conflicts most salient to them personally. Women who began academic careers around 1970 still are working within academe and now have over a quarter-century of observations to share. Rather than asking them to rate factors that I or other authors deemed important, it seemed preferable to assess the factors salient to senior academic women about their own careers in higher education using open-ended qualitative methodology (see Kimmel, 1989). Consequently, I began to ask senior academic women to describe their own careers in the spring of 1997. An earlier analysis of their perceptions (Gerdes, 1999a, 1999b) documented the salience of changes over their careers; frequently mentioned were the increased presence of women, changes in policies or behavior, and/or improvements in beliefs or attitudes. However, almost half of those responding to a separate question concerning unchanged factors noted family problems that remain for women. Further, about two-thirds described remaining areas of bias, primarily subtle or stereotypical biases. In a second analysis (Gerdes, in press), the respondents were asked what we should be teaching our women students and what advice they would give to women just starting academic careers. Almost half of those answering this question included either warnings to be on guard for negative factors that still affect women in higher education or descriptions of "facts of life" that women would have to accept if they choose an academic career, or both. In addition, advice concerning choices to minimize family-work conflict were included in the advice of about 15% of the respondents. These previous analyses suggest stresses and conflicts between work and personal life consistent with previous research. It is the purpose of the current analysis to directly address the respondents' perceptions of level of stress they experience, the sources of stress, and the trade-offs between other roles and their careers.

Method

I distributed a letter of explanation and an open-ended questionnaire via electronic-mail to women identified primarily through listservs of academic deans and higher education administrators and through interdisciplinary lists of faculty members. Using snowball sampling (Patton, 1990), the letter of introduction invited women to answer the questions confidentially and/or forward the questions to others who might participate. Faculty members and administrators who began their careers with faculty positions around 1970 were particularly encouraged to respond. Useable responses were obtained from 98 women. Of these respondents, 11 were current or recent presidents or chancellors; 40 were academic deans, vpaa/provosts, or their associates working in academic or faculty affairs; nine were
other administrators; and 38 were faculty members. Respondents' disciplinary backgrounds spanned the humanities, social sciences, and natural sciences including medicine; they were located across the country (plus several in Canada) and at institutions of every Carnegie classification.

A more detailed description of the respondents is available in Gerdes (in press), and the complete letter of introduction and questionnaire are available upon request. In short, a series of open-ended questions about these women’s early experiences and the most important changes and unchanged factors they had observed provided the context for the questions relevant to this report. Respondents were asked one question (with two parts) concerning stress:

How would you rate the level of stress in your current position -- Very High, High, Moderate, Low, or Very Low? What are the major sources of stress in your current position?

Scores of 1 to 5 were assigned to stress ratings of Very Low to Very High. Also included were two questions concerning integration of other roles with careers:

Have factors in your personal life, such as family, made it easier or harder for you to succeed in your career? (If so, please indicate the stage at which each of these factors impacted your career.)

Has your career in higher education or advancing your career made necessary for you to give up or compromise other goals in your life? Do you believe that the same sacrifices or compromises would have been necessary for a man in your career-track?

To classify sources of stress and the factors mentioned in response to the two questions concerning roles, an inductive method was used to form categories that were distinct and internally consistent. That is, as often suggested for qualitative analysis (e.g., Marshall & Rossman, 1995; Patton, 1990), preliminary categories were determined by first skimming the answers. The separate points made in each answer were then placed into these categories, with new categories added when points did not fit and categories combined when the initial categories could not be distinguished.

Results

Stress

The level of stress reported by these senior women was quite high. The average response for the 96 women who gave a rating on this question was 4.0, or High. The average for the administrators was 4.2 (with 47 out of the 60 administrators giving a rating of High or Very High); whereas the faculty members averaged 3.6, between Moderate and High. This difference between administrators and faculty members is statistically significant, \( t = 3.27, p < .002 \) two-tailed.

Sources of stress were listed by 90 respondents. Volume of work, time pressure,
and difficulties balancing different aspects of work were the most frequently mentioned sources of stress, cited by 51.1% of respondents. These time/workload pressures were mentioned by 26 of the 54 administrators (48.1%) who listed sources of their stress and by 20 of the 36 faculty members (55.6%) who listed sources. There were marked differences in the types of time/workload pressures described. Faculty members typically referred to balancing teaching, research, service, and sometimes administrative commitments; whereas administrators frequently described the simple but severe situation of too much work for the time available or described their current jobs as consuming all of their time and energy.

Another frequent category of stressors included responsibilities to others and for others, others' expectations, and interpersonal conflict. This category of stressors was mentioned by 41 of the respondents who listed sources of stress (45.6%). But, such stressors were reported much more frequently by administrators, by 30 out of the 54 who listed sources (55.6%), compared to only 11 of the 36 faculty members who listed sources (30.6%). At least four of the faculty members who cited this source did so in connection to their work as department chair. Presidents tended to express a sense of feeling responsible for everything or being held responsible by everyone, including conflicting constituencies; whereas the academic administrators and other administrators were more likely to mention personnel problems, other faculty issues, or difficulty addressing superiors' expectations and priorities.

The third large category of sources of stress was resource problems, described either as difficult financial decisions or lack of adequate enrollments, funding, or specific resources such as staffing. Resource problems were cited by 30 respondents (33.3% of those listing sources of stress). Again, this source of stress was reported frequently by administrators, 26 out of 54 listing sources (48.1%), but only by four of the 36 faculty members listing sources (11.1%).

These three large categories of stressors cover most of the specific points mentioned by administrators; faculty women cited more unique sources of stress, such as particular scholarly projects or the nature of their appointment. The only other source of stress to generate more than a couple of responses was having high expectations of oneself, which was cited by nine of the faculty members listing sources (25%) but only three of the administrators (5.6%). In connection with their overall lower ratings of stress experienced in their current job, it is important to note that several of the senior faculty women mentioned that their lives had been more stressful earlier, when they were less established, had young children, or had administrative duties.

Other Roles

The questions concerning other roles asked these senior women to consider their whole careers rather than just their current situations. Answers to these two questions were difficult to separate because many women wrote about their difficulty balancing career and other roles, rather than specifically addressing the effect of other roles on career in answer to the first question and the effect of career on meeting other goals in response to the second. The answers were analyzed under the relevant question regardless of where the respondents placed
them. The answers to both questions were dominated by the issues of marriage and family.

In answering whether other factors in their personal lives made success in their careers easier or harder, 36 (36.7%) women answered harder, 30 (30.6%) easier, and 32 (32.7%) that their personal lives had both positive and negative effects or no effect on their careers. It should be noted that the women who reported both negative and positive effects sometimes were noting the simultaneous pros and cons of the same role (e.g., marriage or parenting) and sometimes were listing a combination of simultaneous positive and negative factors or different factors that impacted their careers in different periods.

The fairly even division of answers obscures the fact that children were overwhelmingly judged to be detrimental to career progress-- even though many women were careful to say that although their careers suffered, their lives were better overall for having children. Of the 30 women who reported that their personal lives had made success easier, 11 said that it was being childless or both childless and single at crucial points that aided their progress. In addition, six of the 32 women who answered that factors in their personal lives had both positive and negative effects on their careers explained the positive effects in the same way. The most frequently reported factors that made career success harder fell into the category of children causing delay in the career, lower mobility, less time devoted to career, or lower productivity, which were reported by 48 of the 68 women who concluded that personal factors had an overall negative effect on their careers or both positive and negative effects. Combining these counts, a total of 64 different women (65.3% of the 98 respondents) mentioned negative effects on their careers of having children and/or advantages of being childless (one mentioned both the advantages of being childless before tenure and the later time demands of having a child).

Ways in which having a spouse or partner limited careers also were frequently mentioned, by 30 of the 68 women who described negative effects. The answers of 20 women fell into the category of lack of mobility, nepotism rules, or commuting or moving to follow a spouse/partner; and the more general problems of time or attention needed by a spouse or some unspecified way in which the spouse or marriage interfered with success were reported by another 10 women. On the other hand, of the total of 62 women who described personal factors that have facilitated career success, 38 women mentioned supportive spouses or partners; and 12 (including some who also had mentioned supportive spouses) mentioned receiving support from children or the ability to focus on priorities at work and keep perspective on work problems because they had the family role (spouse/partner, children, or both) as well. In addition, another eight women mentioned either encouragement from parents or practical help in caring for children from another family member besides their spouse or partner. No other positive effects of other personal factors on their careers were mentioned by more than one or two women each.

The question concerning whether other life goals had been sacrificed or
compromised for the careers was answered by 94 women, and it was possible to gather information relevant to this question from the previous question on personal life effects on the career and from other questions as well. For example, it appears that few gave up the opportunity to have children. Although not asked directly, 65 (66.3%) mentioned children in their answers to these two questions; so at least that many are mothers, and at least two more have stepchildren which appear to be a later or less constant responsibility. At least 29 (29.6%) do not have children (leaving 4 unknown); but only seven describe the fact that they did not have children as at least partially due to their career. Another six reported that they had only one child because of their careers.

Although many did not specifically mention their spouse/partner as a positive or negative influence on their careers, at least 78 women appear to be married or have been married at some point as well as five women who have current or past domestic partners, at least two of which are same-sex partners; altogether this represents 84.7% of the respondents. Another eight may well have had a spouse or partner at some point: two described themselves as single parents although they did not mention a past or present spouse/partner, and six more referred to parenting or family without specifically mentioning a spouse/partner. Those who have never had a committed relationship might be limited to the seven who described themselves as currently single without mentioning a spouse/partner at any point in their careers. At least 21 of the respondents have been divorced and another described the loss of a long-term relationship (a total of 22.4% of the 98 respondents); nine of these do not appear to have current relationships. Of those nine who have not replaced committed relationships, seven attribute their breakup and/or not forming a new relationship to their careers. In addition, four others attributed difficulty forming or maintaining committed relationships at some point to their careers, totaling 11 women who reported sacrificing or compromising the goal of a committed relationship.

Overall, 63 women (67.0% of those responding to this question) believed they had sacrificed or compromised other goals for their careers, 27 (28.7%) did not believe they had done so, four (4.3%) were uncertain or answered both that they had and had not, and four did not answer. The 59 women who addressed the second part of this question concerning whether men in comparable situations would have to make the same choices included some who did not report that they personally had made sacrifices or compromises; for example, some women who did not feel they had sacrificed goals (e.g., because they preferred to be childless or did have children or sacrificed their careers instead of other goals) also answered that men would not have to consider the same trade-offs. However, a good number of women who did report sacrifices or compromises neglected to answer this part of the question. Of those responding, 39 (66.1%) did not believe that men would have to make the same sacrifices/compromises, 14 (23.7%) thought they would, and another six (10.2%) thought they both would and would not; as noted previously, 39 did not answer.

Aside from the problems with committed relationships and limitations on having children detailed above, the most frequently reported sacrifices/compromises due
to career dealt with reductions in time for other roles. The most common category of sacrifice/compromise was a reduction in the amount of time for family (spouse/partner, children, or both) reported by 24 women. On the other side of the same trade-off, another 11 women stated that they put their family first and that is the reason that they did not sacrifice/compromise other goals; it was the career that suffered as detailed above. Along the same lines, 17 women indicated that because they devoted all necessary time to career or to career and family, other personal interests and social life suffered; another two women reported that they had no time for any goals outside of their work. Finally, 11 women reported reduction in the time available for scholarship/writing or artistic development; in addition, two administrators reported giving up teaching as a sacrifice. It should be noted that 12 women spontaneously mentioned that they would like to have a "wife" who would attend to such obligations as household chores and family scheduling and leave them more time for career or time to pursue personal interests; eight of these women stated that men do not have to make the same choices and compromises because such support still is more available to them.

Discussion

This study demonstrates both high stress and trade-offs in roles for academic women. These problems appear to result from the combination of the demanding nature of academic careers, continued expectations for women's responsibilities outside of paid employment, and insufficient time to meet all expectations.

Although revealing high levels of stress, this study alone cannot demonstrate that senior academic women are experiencing more stress than senior men in comparable positions. Yet that conclusion is consistent with other studies. The gender differences previously demonstrated by Dey (1994) continue, as demonstrated in large national surveys. The 1995-96 HERI Faculty Survey National Norms (Sax, Astin, Arredondo, & Korn, 1996) include an overall rating of stress and provide comparisons with the 1989-90 stress data used by Dey. On the three-point rating of overall stress, 44% of faculty women and 27% of faculty men reported extreme stress. Although subtle discrimination showed the greatest decline since 1989-90, especially for women, it still was rated on a three-point scale as extensive or somewhat by 34% of women as compared to 18% of men. As in 1989-90, women continued to be more likely than men to report stress from time pressures, lack of personal time, household responsibilities, and teaching loads; and caring for an elderly parent had increased as a problem for women but not for men. Likewise, in the 1998-99 HERI Faculty Survey National Norms (Sax, Astin, Korn, & Gilmartin, 1999), female faculty reported more stress than men from subtle discrimination (now 35% compared to 17% for men), the review/promotion process, managing household responsibilities, and lack of personal time. Although the HERI sample of academic administrators is not as representative as the faculty sample, gender differences there also have demonstrated greater stress for women. In telephone interviews for the 1999 TIAA-CREF/NORC American Faculty Poll (National Education Association Higher Education Research Center, 2000), faculty members from 285 institutions gave yes or no answers to whether nine personal issues and work-related topics interfered with their academic work and/or caused them stress in the
previous year. For eight of the nine factors, more women than men reported interference/stress, including differences of more than 10% on the work load and physical or health problems. In addition, slightly more women (78%) than men (76%) rated time for family as very important; but fewer women (24%) than men (33%) were very satisfied with this aspect of their lives. From the comments of women in the current study, it is not surprising that 68% of women (as compared to 55% of men) in the American Faculty Poll rated a flexible work schedule very important.

In spite of the high levels of stress reported, very few women in the current study referred to gender issues when asked to identify "sources of stress in your current position." (Only eight women attributed current work stress to their gender, three more mentioned work stress due to commuting, and four others mentioned other family stress that intruded on their work.) For the rest of these senior women, it might be that discrimination was more of a problem earlier in their careers and that lack of institutional support for family issues is less of a problem now that they are past the childbearing and rearing stage of their lives. They are the women who have succeeded and who have conquered the gender disadvantages, to at least some extent. It must be remembered that this question on current stress appeared near the end of a questionnaire on which many had already described egregious instances of blatant discrimination and severe lack of institutional support earlier in their careers; the contrast could make them less prone to identify their current stress with their gender. That explanation would be consistent with their describing a decrease in blatant discrimination against women over their careers but also describing subtle discrimination and conflict with family roles as continuing problems for academic women in general (Gerdes, 1999a, 1999b). In addition, it would be consistent with the problems they described in their own lives when asked to reflect on their whole careers in the questions about integrating other roles.

The differences in types of stressors reported by senior faculty and administrators in this study are consistent with the more independent or autonomous nature of faculty members' work. The relatively lower level of stress reported by faculty women also could derive from their autonomy; or it could be specific to their career stage, which would be consistent with several faculty women's mention of greater stress at an earlier stage when career overlapped with childrearing and their jobs were less secure. For many of the administrative women in this study, who typically came from the faculty, a period of stress from establishing faculty credentials and/or childrearing was followed by increasing responsibility as an administrator; a few even commented that they could not have undertaken the administrative role until their children were older. Most of the administrative women now hold positions that are very demanding, both in terms of time pressures and level of responsibility.

Few studies of stress include attention to the stages of an academic career. Although they did not include outside roles, Bronstein and Farnsworth (1998) did separate established faculty women from women who had been at the institution less than six years; they found no greater disadvantage for newer faculty women in terms of perceived treatment by colleagues and administrators except in exclusion
from social events and decision-making. In fact, some disadvantages, such as negative treatment by students and inappropriate sexual attention from colleagues and administrators, seemed to occur so infrequently that they had a greater impact on women who had been at the institution longer. Lease (1999) defined new faculty as those with five or less years of postdoctorate experience; using combined scales of work-role stressors, she found no differences due to experience but did find the relationship between household work and stress reported earlier. It may be that five or six years into the career is not the best dividing point for academic women and that different types of stressors dominate at different stages of the career.

Although they did not separate men and women, Sax et al. (1996) did analyze the 1995-96 HERI faculty data for the level of specific stressors at different ages. For example, ratings of stress from childcare as extensive or somewhat peak in the 35-44 age group, and ratings of stress from the review/promotion process and from research or publishing demands are highest in the under 35 and 35-44 age groups. The highest rated concerns were time pressures, lack of personal time, household responsibilities, personal finances, and teaching load; ratings of all of these stressors drop somewhat by the 45-54 cohort, drop more dramatically by 55-64, yet remain high at all ages. It should be noted that this is a cross-sectional rather than longitudinal comparison, and it is not clear that the stages of highest stress on different dimensions correspond as neatly to age for women as for men. For example, the current study included some faculty and administrative women who delayed their careers to care for children and some women who married late because of their careers, as well as those who integrated marriage, children, and career in the same timeline as typical of their male colleagues. In terms of interference from family and household roles, Sax et al. (1999) note that men and women faculty have about the same number of children but that women are more likely to interrupt their careers for family reasons or health as well as being more likely to spend at least 17 hours per week on household and childcare duties. Although most stress studies focus on faculty members, the change in stressors could be even more complex for administrative women, depending on when they move from faculty to administration.

Although the respondents in this study are senior women who could believe that gender-related stresses ended in the 1970s or 1980s, there is evidence that they do perceive continuing problems for younger women (Gerdes, 1999a, 1999b, in press). It can be argued that it is no easier now for women to integrate career and outside roles and that institutional responses have not been sufficient. An interview study of early career faculty conducted by the American Association of Higher Education (Rice, Sorcinelli, & Austin, 2000) identified time pressures, balancing work roles, and balancing professional and personal life as major stresses for these faculty members, and identified these stresses and subtle discrimination as particularly intense for women. Other recent articles describe the problems for academic women of balancing parenting and career (O’Laughlin & Bischoff, 2001), dual-career couples (Wolf-Wendel, Twombly, & Rice, 2000), and commuter marriages (Harris, Lowery, & Arnold, 2002) and demonstrate the relationship between family responsibilities and faculty employment status (Perna, 2001).
Perna (2001) questions whether increases in women's numbers in higher education will improve their job status and rewards because advancement may always be limited by their family responsibilities. Likewise, Glazer-Raymo (1999) argues that women's progress in higher education is threatened both by the illusion that gender neutrality has been achieved and the shift in institutional priorities away from social justice to a more corporate mentality. The corporatization of higher education includes the backlash against affirmative action and greater use of part-time and nontenure-track faculty, who are disproportionately women. Glazer-Raymo (1999) believes these trends are unlikely to be reversed unless women speak with a collective voice, as in campus commissions. Wolf-Wendel et al. (2000) urge the development of institutional policies to assist dual-career couples to work and live in the same area. O'Laughlin and Bischoff (2001) list specific family-friendly policies needed by academian parents: extended tenure deadlines, high quality daycare, flexible work schedules, expanding event scheduling beyond evening hours that conflict with family, parent-academian mentors, and sensitivity training for colleagues and superiors. As Perna (2001) and others point out, such policies would assist all faculty but are especially crucial to women's success.

To end on a positive note, the senior women in this study clearly saw themselves as having choices. They did not report feeling powerless in the face of obstacles; instead, their answers conveyed the attitude that they have succeeded in optimizing the options now available to women. They are proud of the way they have put their lives together to meet as many of their goals as possible-- although they are aware that they had to work very hard to do so.

Note

The author would like to thank the busy women who gave generously of their time to participate in this study.

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