

Women and men medical students' intended commitments to profession and family were explored at three times during their training. At the global level, women and men anticipated giving equal balance to family and profession in the future. At a more specific level, there were significant gender differences in planned commitments to profession and to family. Although all students anticipated giving more hours per week to professional roles, men anticipated significantly more hours devoted to profession each week than did women. Women anticipated more hours devoted to family than did men. Over time in medical school, all students' intended hours in profession increased and hours in family decreased, pointing to an inundation of family life by professional demands. Global-level measures suggested change in division of domestic labor among women and men, but specific-level measures suggested persistence of traditional patterns.

Development of Work and Family Commitments

A Study with Women and Men Medical Students*

LINDA GRANT

University of Georgia

KATHRYN B. WARD

Southern Illinois University at Carbondale

DONALD R. BROWN

WILLIAM E. MOORE

University of Michigan, Ann Arbor

The graduation of increasingly larger proportions of women physicians each year has generated interest within the medical profession about balance of work and family commitments. One example of this concern was the dramatic response to an editorial on the subject appearing in the *New England Journal of Medicine* (Angell, 1981).

**We appreciate aid in data analysis from Bill Ganza, Nancy Genero, Roland K. Hawkes, and Paula Nurius. Jean Atkinson and anonymous reviewers made helpful comments on an earlier draft of the manuscript. An earlier version of the article was presented at the American Sociological Association meeting in San Antonio, Texas. A grant from the Commonwealth Fund supported portions of the research.*

JOURNAL OF FAMILY ISSUES, Vol. 8 No. 2, June 1987 176-198

© 1987 Sage Publications, Inc.

The editorial discussed difficulties women face in combining wife/mother and physician roles and called for a restructuring of medical practice so that mothers of young children could interrupt their work without serious penalties. Written by Marcia Angell, a physician, mother, and deputy editor of the publication, the editorial drew the second-largest volume of response mail in the journal's history (Angell, 1982). Most responses came from young physicians or medical students wrestling with the issue.

The inflexible time demands and on-call responsibilities of medicine make balancing work and family roles especially problematic for doctors. Not only do doctors' work roles involve unpredictable schedules, but professional norms stress service and sacrifice of personal life (Broadhead, 1983; Coser and Coser, 1974; Gerber, 1983; Mandelbaum, 1981). Broadhead writes of an "inundation" of family life by the doctor role, beginning in medical school. Families face pressure to release students from personal roles, and family life becomes organized around work schedules. Medical schools expose students to role models of heavily committed careerists who do not mention family (Broadhead, 1983). Students encounter few women physicians, especially those combining careers and family (Braslow and Heins, 1978).

Young people entering other professions face similar, although usually less intense, conflicts. Careers such as law and academics require heavy commitment and long hours in the early years, coinciding with periods when marriage and childbearing are most likely.

Broadhead (1983) found that the women and men medical students he studied envisioned changes in priorities after graduation, with family life receiving more emphasis, but he speculated that few changes occur. Research on work and family roles of practicing physicians confirm his prediction, although nearly all have been carried out only with male physicians (Fine, 1981; Fowlkes, 1980; Gerber, 1983). Broadhead suggests that women have a particularly difficult time combining physicians' careers and family roles. Men view professional involvement as consistent with fulfillment of family roles because career growth provides economic security and social status for families. Men's families and friends endorse such interpretations. Women, in contrast, are more apt to view time invested in medicine as time taken away from family. Their families and friends reinforce these perceptions of conflict, reflecting norms that family,

housework, and child care are women's responsibilities (Fox and Hesse-Biber, 1984). Other studies of women physicians suggest that they perceive more conflict between family and profession than do men (Mandelbaum, 1981; Roeske, 1973).

Men's greater investment in external achievement and women's greater concern about relationships is consistent with gender-differentiated pathways of development among young adults (Gilligan, 1984). Significant others provide reinforcement consistent with social expectations that women will perform emotional labor, at home and at work, while men will concentrate on task achievement (Hochschild, 1983). Beer (1983) points out that convention and law require men but not women to support their families economically, underlining the centrality of the "breadwinner" role for males. Social expectations impinging on adults' lives reinforce socialized patterns.

WOMEN'S AND MEN'S WORK AND FAMILY COMMITMENTS

Although only a few studies have addressed work and family balance among women physicians (Broadhead, 1983; Heins et al., 1977; Lorber, 1984; Mandelbaum, 1981; Nadelson and Nadelson, 1980), a substantial literature has examined work and family roles among employed women. (Barnett and Baruch, 1985; England and Farkas, 1986; and Fox and Hesse-Biber, 1984, provide reviews and critiques.) A common finding is that whatever the demands of a woman's occupation, she bears primary responsibility for home and child care. For women, full-time employment outside the home usually means only a slight reduction in time spent on housework and influences little the domestic work by husbands (Coverman, 1985; England and Farkas, 1986; Pleck, 1985). Most of these studies show wide gaps between men's attitudes favoring shared home and child care when both partners work and men's actual behaviors in this regard. Although Pleck's (1985) recent study shows modest increases in men's hours in domestic tasks, especially when the family has very young children, working women still do the lion's share of housework and child care.

PHYSICIAN'S COMMITMENT TO WORK AND FAMILY

Analyses of work and family issues among male physicians have concentrated more on ways in which their work roles influence the well-being of spouses and family members than on the men's own views (Fine, 1981; Fowlkes, 1980; Gerber, 1983). Studies of women physicians show that they, like other workers, shoulder most of the burden of home and child care, although most practice nearly as many hours per week as men doctors who do little or no domestic work (Heins et al., 1977; Lorber, 1984; Mandelbaum, 1981; Roeske, 1973). Recent surveys show that although women and men physicians average far greater than the normal 40-hour full-time work week, women practice fewer hours than men (Brown and Olson, 1986; Weisman and Teitelbaum, 1986). In Weisman and Teitelbaum's study of obstetricians and gynecologists beginning practice in the 1980s, men averaged 7.5 more weekly practice hours than women. However, when practice situations and family structures were controlled, differences in practice hours persisted only for women with small children. Mothers of young children practiced significantly fewer hours than childless women doctors or men who either were or were not parents. Other studies have suggested that women doctors are ambivalent about delegating housework, and especially child care, to others. Many prefer alterations in normative career patterns to allow mothers of small children time off without serious career penalties (see Angell, 1982; Rinke, 1981).

Mandelbaum's longitudinal study showed that the women doctors studied felt the highest levels of conflict when they had young children. Her findings are consistent with Weisman and Teitelbaum's research and with recent research by Barnett and Baruch (1985) on women in various occupations, which suggests that the mother rather than the spouse role creates potentially damaging stresses for women workers.

One response to work and family conflicts for women doctors is to adopt the "superwoman" life-style. Rinke (1981) describes this as a relentless compulsion to excel in both domains. Another, suggested by Angell (1981, 1982), and criticized heatedly by many who responded to her editorial, is curtailing of career involvement by women while children are young. Longitudinal studies assessing the

consequences of either strategy are rare, but each holds potentially negative consequences. The first might expose women to increased risks of physical and mental exhaustion, burnout, and more serious problems. The second risks limited attainment and the frustration and diminished self-esteem resulting from lack of career achievement (see Mandelbaum, 1981).

EMERGENCE OF WORK AND FAMILY COMMITMENTS

Although research on physicians and other working couples clearly indicates that women usually suffer the overload resulting from dual commitments to work and family, the evidence is less clear on when, how, and why these differences emerge. Some explanations stress early childhood socialization, which encourages girls to emphasize family over career and boys to stress career over family (Fox and Hesse-Biber, 1984; and Frieze et al., 1978, provide summaries). Gilligan (1984) argues that females' propensities to stress relationships and men's to stress external achievement are intensified in late childhood and early adulthood. The expressive/instrumental split among women and men seems to color young people's self-expectations and others' perceptions of their competencies and behaviors (Deaux, 1984; Spence et al., 1985). With maturity, expectations are translated into behaviors. An implicit assumption of many developmental explanations is that patterns laid down early in life are difficult to change. Change presumably occurs only by modification of socialization of subsequent generations.

Other explanations emphasize social and structural factors rather than attributes of individuals to explain gender differences in work and family commitments. These theories emphasize expectations that others hold about women's and men's roles rather than qualities of individuals (Deaux, 1984; Hochschild, 1983). Expectations embedded in the workplace and domestic life subtly but powerfully channel men and women toward normative roles for persons of their gender. Even if expectations about women's work motivations and commitments are erroneous, they systematically skew options, barriers, and contingencies affecting career development (Bernard, 1981; Epstein, 1970; Hochschild, 1983; Lorber, 1984). Situational and normative pressures also discourage men from heavy investment in home life.

There is evidence that men receive few social supports for playing domestic roles and face more hostility at work than women do when family interferes with jobs (Hood and Golden, 1979; Lein, 1984; Nadelson and Nadelson, 1980). Some women also resist giving up domestic duties and/or find men's competence in such tasks to be threatening (Agassi, 1982; Goode, 1982; McKee, 1982). Such normative pressures may account in part for the apparent discrepancies between men's attitudes and behaviors with regard to domestic work. Because they are more powerful in society, males also have greater ability to avoid disliked or devalued tasks.

Organization of the workplace is another situational factor affecting work and family balance. Given normative career patterns, individuals who invest heavily in family may be penalized in career achievement. The situation may be particularly acute in medicine, where work roles have been rigidly defined and innovation in training or practice arrangements have been slow to evolve (Angell, 1982; Lorber, 1984; Rinke, 1981). If women doctors continue to make heavier family investments and receive less support from spouses in occupational roles in comparison to men, their attainments are likely to be more limited than men's.

PROFESSIONAL SOCIALIZATION AND WORK/FAMILY COMMITMENTS

Professional socialization of physicians has been described as a special form of adult socialization (Broadhead, 1983; Bucher and Stelling, 1977; Light, 1980; Lorber, 1984; Shuval, 1975). Students are socialized by faculty, practicing physicians, peers, parents, significant others, patients, and they are also self-socializing. Women physicians often lack appropriate role models and as a result fashion a composite professional identity drawn from many sources. Programs and training sites may encourage students toward certain investments in work and family, and pressures may differ systematically by students' gender. But students respond variably to socialization experiences. The process is dynamic, and the final outcome is difficult to predict.

Although medical socialization is similar to other types of professional socialization, it differs from other forms in ways that may have implications for work and family commitments. First, the

training schedule limits students' contacts with same-aged friends outside medicine but intensifies identification with peers (Bucher and Stelling, 1977; Shuval, 1975). Professional peers become especially important socializing agents.

Second, the exhausting pace of medical school limits time for reflection and self-analysis. Some authors argue that medical students are less self-aware and interpersonally sensitive than young people in other fields (Broadhead, 1983). Medical students may be less able than others to foresee and resist intensive work involvement.

Third, medical socialization stresses autonomy and self-sufficiency as components of a professional identity. These norms may encourage young doctors more so than other professionals to attempt to be "superwomen" or "supermen," taking on heavy commitments in all domains of life. These norms also may discourage them from seeking aid when they encounter difficulties (Bucher and Stelling, 1977), making them less able to handle conflicts effectively.

Fourth, the service norms associated with medicine—putting needs of the patient above all else—may complicate young physicians' abilities to cordon off time for family without feeling guilty (Broadhead, 1983; Gerber, 1983). Gerber notes that physicians justify work intrusions on family time by the rationale that they hold life-or-death responsibilities. They permit constant interruptions of family life, although few of the intrusions actually involve critical cases.

The special circumstances of medical socialization may pressure new recruits to make heavy investments in work at the expense of family. The structure of training programs also cuts off students' contacts with others who might argue against such a commitment. It is uncertain whether such pressures will be applied to and will be effective with women and men in the same manner. Medical socialization also elevates the importance of peers as socializers of many orientations, including norms about work/family.

GOALS OF THIS STUDY

This study emphasizes the emergence of work and family commitments over time in women and men physicians. Most previous works have concentrated solely on professional commitments. The few that have examined family commitments have usually been focused on practicing physicians, rather than students who are in the process of

working out professional and personal identities. Single time-point studies of practicing doctors provide only limited insights into the process by which work and family commitments develop. They also tell us little about the antecedents of possible gender differences in commitments. This study addresses the following questions, which have not been fully resolved in previous research:

(1) What are contemporary women's and men's planned commitments to work and to family?

(2) Are patterns of commitment to each domain similar or dissimilar when commitments are measured at the global or the specific level?

(3) Do students' commitments remain stable, or are patterns of planned commitments to work and family altered during medical school? Do women and men change in similar or dissimilar ways?

The first question explores whether gender-differentiated patterns observed in the past persist among recently graduated students. More-recent graduates have been in medical school classes where women constitute greater-than-token proportions. Gender composition of cohorts might influence professional orientations of contemporary students as compared to doctors trained earlier. (See Bluestone, 1978, for fuller discussion of this issue.)

The second question probes the apparent split noted in previous research between attitudes and behaviors, particularly among men, about work and family balance. Fishbein and Ajzen (1975) distinguish between attitudes, which are evaluative orientations toward phenomena or objects, and behavioral intentions, which are specific expectancies one holds about one's future behaviors. They find behavioral intentions more closely related than attitudes to actual behavior. Behavioral intentions are influenced by attitudes, but they also reflect perceived normative pressures to act in certain ways.

Answers to the third question will shed light on the extent to which work/family commitments are set prior to medical training (supportive of an early socialization explanation of gender differences) and the extent to which differences evolve during training (more supportive of a social structural explanation).

DATA SOURCE

The work and family orientations of new doctors are examined with longitudinal, self-administered questionnaire data collected

from students graduated from a small, accelerated premedical-medical program at a large midwestern university. The program admits highly qualified young people directly from high school and trains them as physicians in six years. Analyses are based on graduates in 1979-1983. There were 206 graduates in these years (61% men and 39% women). Respondents included in this study were the 192 students for whom complete data were available for three waves of data collection (described below). Of the respondents, 116 (60.4%) were male and 76 (39.6%) were female. Participation in all waves was unrelated to cohort or to gender. However, students with poor academic records were less likely than others to be represented among the complete data cases.

Most respondents came from middle- and upper-middle class families where both parents held college degrees and fathers most typically held professional or executive positions (Grant et al., 1986). Since the program did not accept applications from persons over age 19, all entrants were 17 to 19 years old (mean = 18.7 for both women and men). Nearly all respondents (96%) were white. Although a majority earned their B.A. and M.D. degrees within six years, a seven-year option was available. Of the students in these classes who completed the program, 17% took seven years. Women were slightly more likely than men to finish in seven rather than six years (19% versus 16%). "Dropping back" most often occurred in the first or second year of the program, when students were taking liberal arts courses. In this article, students who dropped back are assigned to their graduating rather than their entering cohorts.

Data were collected at three transition points in the curriculum. Time 1 was near the end of year two, as students completed liberal arts courses. Time 2 was near the end of the fourth year, as they completed medical school basic science courses but as yet had had little experience with patient care. Time 3 was near graduation, as students completed two years of clinical rotations. At Time 3, students were playing doctors' roles and carried some responsibility for patient care and medical decision making. During this phase, they often were identified by patients as physicians.

Less than 3% of the students were or had been married prior to entering the program. By graduation, from 10% to 16% (depending on cohort) had married, most in the previous year. No data were available about living arrangements or nuptial plans of those who were single at graduation. Only five students (three women and two

men) had children before graduation. Thus, by graduation, students had firsthand experience with professional roles, but for most, marriage and parenthood were speculative and in the future.

Graduating cohorts had from 32 to 54 members. The 1979 class consisted of 19 men and 11 women; the 1980 class, 24 men and 15 women; the 1981 class, 22 men and 22 women; the 1982 class, 30 men and 15 women; and the 1983 class, 32 men and 22 women. To permit sufficient numbers for multivariate analyses, data from each wave were combined across cohorts. This step was taken only after examination of means on variables indicated no discrepancies in patterns by gender across cohorts. The small numbers of women in some cohorts precluded detailed analyses of cohort effects.

Data were gathered by use of a fixed-response, self-administered questionnaire, part of an ongoing evaluation project. Items analyzed here appeared in identical form on each wave's questionnaire. Questionnaires were completed during class time for Times 1 and 2. They were completed during scheduled appointments at Time 3. Participation was voluntary, and students were assured of confidentiality.

MEASURES

Intended family plans were measured by asking, "What do you expect your family situation to be like?" Responses were married with children, married without children, single, or some alternative family situation. The latter two categories were combined for analysis, since less than 10% of the students at any time responded in either category. Responses were coded, respectively, 1 through 3, so that a low score represented heavier anticipated involvement in family (married with children) and a high score a lesser anticipated involvement in family (single or alternative family).

The relative priority assigned to family or career at the global, attitudinal level was assessed by asking, "What type of balance do you expect to achieve between profession and family?" for which possible responses were family more heavily emphasized (coded 1), profession and family equally emphasized (coded 2), or profession more heavily emphasized (coded 3). Only those students who indicated they planned to marry (whether or not they intended to have children) were asked this question. Therefore, students who

intended to be single or in an alternative family at any time were excluded from analyses involving this variable.

Behavioral intentions related to work and family commitments were measured at a specific level by asking about students' anticipated weekly hours' investment in work and family. The work question was worded in the following way: "How much of your time do you expect to be taken up by your profession?" The family question was worded in the following way: "How much of your time do you expect to be taken up by your family?" Possible responses for both were less than 10 hours weekly (coded 1); 10 to 20 hours (coded 2); 20 to 30 hours (coded 3); 30 to 40 hours (coded 4); 40 to 50 hours (coded 5); 50 to 60 hours (coded 6); and more than 60 hours (coded 7). The professional hours question was asked of all students, while the anticipated family hours was asked only of those intending to marry.

ANALYSES

For each of the four dependent variables—intended family situation, intended primacy of family or profession, anticipated hours devoted to profession, and anticipated hours devoted to family—we first report means and standard deviations for women and for men at the three periods. To examine whether intentions of women and men are established prior to medical school or are altered during medical school socialization, we performed 2 (gender) \times 2 (prior scores at Times 1 and 2 on the relevant variable) ANOVAs with Time 3 scores on each variable used as the dependent variable. The ANOVAs allow us to estimate whether gender differences existed prior to medical school and whether the medical school experience accentuated, diminished, or had little effect on intentions of women and men. In these analyses, significant Time 1 or Time 2 effects indicate stability in students' intentions throughout medical school, supportive of an early socialization explanation. Lack of significant time effects indicates that students' intentions changed during medical school, more supportive of an explanation that important socialization occurred during medical school.

RESULTS

INTENDED FAMILY SITUATION

Table 1 shows means and standard deviations for women and men on the intended future family intentions variable at each data-collection point. A majority of women and men (from 74% to 78%) at all times anticipated being married and having children. Means for women and men are similar at all times, and the means show slight movement toward the most traditional pattern (married with children) as students progress in medical school.

In the 2×2 ANOVAs, Time 3 scores on intended family situation were treated as a scaled variable, with 1 = married with children; 2 = married without children; and 3 = single or alternative family situation. There was no significant main effect of gender in students' intended future family situations ($F = .22$, $df = 1, 182$, ns). There were, however, significant effects of students' Time 1 scores ($F = 5.88$, $df = 2, 182$, $p = .004$). Students' Time 2 scores were not significant, and none of the time \times gender interaction terms was significant. The model accounts for 16.3% of the variance in students' Time 3 family intentions. The results suggest that expectations about family involvement are established prior to medical school and the medical school experience does little to alter plans of either women or men. The analyses also suggest that if students' intentions are accurate predictors of their future family situations, balancing of work and family is an issue most will face as doctors.

PRIMACY OF FAMILY OR PROFESSION

At all three times, the majority of women and men anticipated giving equal balance to work and family. (Means and standard deviations on this variable at three times are shown in Table 2.) These calculations are based on 156 students, since those not anticipating marriage were instructed not to respond. Also, 14 students (9 men, 5 women) did not respond or responded in more than one category at some data-collection point. For women and men at all times, means clustered near the 2.0 point, indicating equal emphasis to profession and to family in their plans. Standard deviations for women were similar over time (ranging from .49 to .55) but increased in magnitude

TABLE 1
Means (and standard deviations) of Women and Men
Medical Students' Intended Future Family Situation
at Three Times During Medical School

	<u>Women</u>		<u>Men</u>	
	Mean	S.D.	Mean	S.D.
Time 1	1.6	(.85)	1.5	(.82)
Time 2	1.3	(.62)	1.3	(.60)
Time 3	1.3	(.61)	1.4	(.73)

NOTE: N = 192: 76 women, 116 men. Codes for family situation: 1 = married with children; 2 = married without children; 3 = single, or alternative family.

slightly for men, indicating more dispersion in men's preferences at Time 3.

In the 2×2 ANOVAs, Time 3 scores on the primacy of work or family variable were treated as a scaled variable of intended predominance of profession, with high scores denoting professional emphasis and low scores family emphasis. Once again, there were no significant main effects of gender on this global-level measure of students' intentions ($F = .73$, $df = 1, 146$, ns). However, there were significant main effects of students' scores at Time 1 ($F = 5.86$, $df = 2, 146$, $p = .004$) and Time 2 ($F = 10.84$, $df = 2, 146$, $p = .0001$) on their preferences at Time 3. The Time 1 \times Gender interaction terms were not significant. The model accounted for 28% of the variance in students' Time 3 scores. As was the case for intended family situation, students' intentions at the global level for balance of work and family remained stable throughout medical school. Women and men were similar in their preferences for an equal balance of work and family.

ANTICIPATED HOURS DEVOTED TO PROFESSION

Table 3 shows means and standard deviations of women's and men's responses at three times to the question about anticipated weekly hours devoted to profession. The means reveal two patterns. First, anticipated commitment to profession was heavy and increased over time for women and for men. Second, at each time, men's

TABLE 2
Means (and standard deviations) of Women and Men
Medical Students' Intended Future Emphasis on Profession
and Family at Three Times During Medical School

	<u>Women</u>		<u>Men</u>	
	Mean	S.D.	Mean	S.D.
Time 1	2.0	(.51)	1.9	(.61)
Time 2	1.9	(.49)	1.8	(.57)
Time 3	2.0	(.55)	2.1	(.73)

NOTE: N = 156: 61 women, 95 men. Codes for profession and family emphasis: 1 = family more heavily emphasized; 2 = family and profession emphasized equally; 3 = profession more heavily emphasized.

anticipated hourly commitment to profession exceeded women's; t-tests for use with samples of unequal numbers showed significant gender differences at each time at the .05 or lower level. Nevertheless, at no time did women anticipate practicing, on the average, less than a 40-hour week.

An ANOVA with students' Time 2 scores used as the dependent variable revealed significant main effects of gender ($F = 6.34$, $df = 1$, 177 , $p = .002$) and of Time 2 scores ($F = 3.51$, $df = 4$, 177 , $p = .002$) on anticipated hours devoted to profession at Time 3. Time 1 scores did not have a significant estimated impact, net of the effect of Time 2 scores ($F = 1.79$, $df = 4$, 177 , $p = .13$). Interaction terms were not significant. The model accounted for 14% of the variance in students' Time 3 anticipated hourly commitments to profession.

The data reveal that the women and men differed in their intended weekly hours' commitment to profession when they entered medical school and that this gender difference was maintained over time. However, the apparent effect of medical school socialization was similar for women and for men. Both increased their estimates of hours to be spent in profession as they progressed through medical education.

ANTICIPATED HOURS DEVOTED TO FAMILY

Means and standard deviations of women's and men's anticipated hours devoted to family each week are reported in Table 4. Students

TABLE 3
Means (and standard deviations) of Women and Men
Medical Students' Intended Future Hours per Week Devoted
to Profession at Three Times During Medical School

	<u>Women</u>		<u>Men</u>	
	Mean	S.D.	Mean	S.D.
Time 1	4.3	(1.15)	5.4	(1.01)
Time 2	5.4	(.82)	5.8	(.72)
Time 3	5.5	(.79)	6.0	(1.03)

NOTE: N = 192: 76 women, 116 men. Coding of time devoted to profession: 1 = less than 10 hours weekly; 2 = 10 to 20 hours weekly; 3 = 20 to 30 hours weekly; 4 = 30 to 40 hours weekly; 5 = 40 to 50 hours weekly; 6 = 50 to 60 hours weekly; 7 = more than 60 hours weekly.

who failed to respond to the family situation question or who responded in the categories of single or alternative family at one or more times are not included in these totals. Therefore, these analyses are based on 170 remaining cases, 99 men and 61 women.

Comparisons of Tables 3 and 4 indicate that students at all times anticipated fewer hours devoted to family than to profession. The modal response for hours in profession for most students at each data-collection point fell into the 40 to 50 hours per week range, with men at Time 3 anticipating more than 50 weekly hours devoted to profession. With two exceptions, responses for all groups at each time for anticipated family hours were in the 30 to 40 hours per week range. Women at Time 1 anticipated spending slightly more than 40 hours with family, and men at Time 3 expected to spend slightly less than 30. T-tests for samples with unequal Ns indicated these gender differences to be significant at each time period.

In contrast to anticipated time spent in profession, projected hours to be devoted to family decreased during medical school. It should be recalled that means for hours in profession and hours in family were calculated on a slightly different case base, since students not planning marriage did not respond to the family hours item.

An ANOVA using Time 3 scores on anticipated family hours as the dependent variable revealed significant main effects of gender on students' anticipated hourly investment in family ($F = 3.91$, $df = 1$, 148 , $p = .025$). There also were significant main effects of Time 1

TABLE 4
Means (and standard deviations) of Women and Men
Medical Students' Intended Future Hours per Week Devoted
to Family at Three Times During Medical School

	<u>Women</u>		<u>Men</u>	
	Mean	S.D.	Mean	S.D.
Time 1	5.03	(1.36)	4.48	(1.35)
Time 2	4.94	(1.31)	4.27	(1.26)
Time 3	4.42	(1.04)	3.94	(1.39)

NOTE: N = 170: 71 women, 99 men. Coding of categories is the same as for Table 3.

scores ($F = 3.35$, $df = 5, 148$, $p = .003$) and Time 2 scores ($F = 1.85$, $df = 6, 148$, $p = .046$) on anticipated hours in family at Time 3. Finally, there were also significant Time 1 \times Gender interactions ($F = 3.63$, $df = 5, 148$, $p = .002$). The model accounted for 26.2% of the variance in students' Time 3 scores.

Follow-up tests (Tukey's studentized) were employed to explore the nature of the Time 1 \times Gender interactions. The significant interaction was accounted for primarily by the different response patterns at Time 3 by women and men who at Time 1 responded in categories 2 or 3 (10 to 20 hours weekly or 20 to 30 hours weekly, respectively). Women in these categories increased their estimates of anticipated hours with family. By Time 3, their estimates of family hours were close to those of women who initially had estimated spending 30 or more hours weekly with family. Whatever women's Time 1 scores, women tended to converge at Time 3. This pattern also is noticeable in Table 4, where standard deviations of women's scores at Time 3 were sharply smaller than women's scores at other times and men's at any time. The relationship between women's Time 1 and Time 3 scores was not linear. Mean scores at Time 3 for women responding in categories 2 to 7 at Time 1 were, respectively, 5.0, 3.8, 4.4, 4.1, 4.8, and 4.2. All categories except the first ($N = 4$) contained 5 or more cases. Thus, the range of women's scores at Time 3 narrowed, with most falling into the 30-to-40 hours category, regardless of their earlier scores.

Men's Time 3 scores show a clearer, more nearly linear, relationship to their Time 1 scores. No males were in categories 1 or 2 at Time

1. Men with Time 1 scores in categories 3 to 7 had Time 3 scores, respectively, of 3.2, 4.0, 4.5, 2.3, and 4.7. The men who had been in category 3 at Time 1 remained substantially lower in anticipated family hours at Time 3 than male classmates who initially had anticipated more family hours. The only deviation from linearity occurred for males who had responded in category 6 (50-60 weekly hours in family) at Time 1, who had a mean of 2.33 (20-30 hours) at Time 3. This fluctuation probably is explained by the small case base ($N = 3$) for this category. All other categories contained 11 to 38 men respondents in Time 1.

In sum, there were significant declines over time in women's and men's anticipated family hours. At no time did either group's intended hours devoted to family outstrip their estimates of intended hours devoted to profession. Women students had higher estimates of hours to be devoted to family early in medical school than did the men, and these gender differences persisted through their training. Finally, men's Time 3 scores showed variation and some association with their earlier estimates of family hours, while women's scores showed less variation and less association with earlier estimates.

DISCUSSION

Our study presents a complex picture of orientations toward profession and family among newly graduated women and men doctors and changes in orientations during medical school. The global-level measures of attitudes and the specific-level measures of behavioral intentions suggest different patterns of behavior related to work and family balance among young physicians. Fishbein and Ajzen (1975) argue that behavioral intentions are the better predictors of actions, since they reflect not only preferences but also normative pressures that influence behavior.

At the attitudinal level, women and men apparently prefer equal centrality of work and family in their lives. These aspirations seem to remain essentially unchanged throughout medical school. For women doctors, these preferences represent a persistence of preferences articulated by earlier generations of women physicians (Heins et al., 1977; Mandelbaum, 1981; Rinke, 1981). Since men's preferences for work and family balance have not previously been studied, it is impossible to know whether the preferences of the young men in this

study for an equal balance of work and family are similar or different from those of earlier generations of men doctors. The global-level measures suggest a breakdown of gender-stereotypical roles among both women and men, greater male involvement in family life, and perhaps also a more equitable sharing of work and family tasks with spouses for women physicians, if they marry men with attitudes similar to those of their men classmates.

The specific-level measures suggest an opposite interpretation, however, and point to persistence of gender-stereotypical roles. These measures reveal a dominance of profession over family among both genders, despite students' stated preference for an equal balance between family and profession. This expectation is well established before graduation. Medical socialization seems to increase the anticipated hours' commitment to profession among women and men, apparently at the expense of family time. These measures suggest that women adopt the prevailing norms within medicine about heavy investment in profession. This is contrary to theories that argue that as women come to represent greater than token proportions of trainees and professionals, they will redefine normative career patterns to allow more hours for family (Bluestone, 1978). Nor do our data provide strong evidence that young women physicians will emphasize relationships over external achievement (Gilligan, 1984). Although the women we studied did envision heavier investments in family than did the men, they, like their male classmates, intended to make the heaviest hourly investments in profession. Rather than forging new patterns of physician careers that allow more time for family and personal life, women in medicine seem to be adopting the normative work patterns of men in the profession.

The specific-level measures give some evidence of persistence of more-traditional gender arrangements. The women we studied still anticipated devoting relatively more time to family life than did the men, although they anticipated devoting nearly as many hours to profession as did the men. Means on professional hours for the women indicated that most anticipated practicing 40 hours or more weekly. A caution is in order. As Angell (1982) has noted, it is unclear how many hours must be spent in profession and in family to be effective. It is possible that students envision family as being equally important to them as profession, although they anticipate spending fewer hours with family. The flattening out at Time 3 of women's, but

not men's, anticipated hours in family is intriguing and deserves further exploration in future research. One possible explanation is that the women perceived by Time 3 that if they wished to marry, a minimum investment of hours in family (30-40 per week) is required, regardless of their preferences. The men apparently did not perceive a need for a minimal investment in family if they wished to marry. Their anticipated hours in family apparently continued to be influenced by their earlier preferences.

Although few students in this study had married by graduation, it is likely that most had friends who had married. Perhaps by observations of others' lives, the women may have concluded that marriage required of them the investment of a minimum number of hours. This hypothesis is speculative. Examination of its validity would require information on students' perceptions of time demands of profession and family and the consequences of failing to meet them. It is, however, consistent with Coverman's (1985) finding that men more so than women reduce hours spent in family when job demands are heavy. Women's domestic work time is less responsive to job demands. It also is consistent with Coser and Coser's (1974) argument that family life requires greater commitment from women than from men and Weisman and Teitelbaum's finding that having young children seems to reduce women's but not men's medical practice hours.

Our data do not offer clear support for either an early socialization or a situational pressure explanation of development of women and men's work and family commitments. Our data suggest that at the specific but not the global level, there are different expectations among women and men about time they will devote to profession and to family when they enter medical school. There seems to be a contextual effect of medical school socialization that is similar for women and for men whereby each gender increases anticipated hours in profession and decreases anticipated family time. Nevertheless, the initial gender differences observed in women's and men's planned commitments to profession and family seem to persist. It is possible that such differences are reinforced in medical school. At the least, medical socialization does not seem to counter them effectively. It is also possible that support for maintenance of gender differences derives more from other sources, such as maturation or parental and peer influence, rather than the medical school environment. The gap between global-level commitments and the specific measures point to

normative pressures on young people to behave in gender-stereotypical ways, regardless of personal preferences. Such pressures seem to have exerted an impact on students' plans as early as the conclusion of their second year in the six-year program.

Some qualifications should be noted before we consider the implications of findings. First, the students and program we studied may or may not be typical of other medical schools and other types of professional socialization. Second, the relatively small numbers of women in some classes and the lack of variation among women and men on the intended family situation variable precluded exploration of the time sequence and complex relationships among marital plans and hours of commitment to profession and to family. Third, the relatively low levels of explained variance in ANOVAs suggest that there are other factors (for example, specialty choice) that we have not explored that have important impacts on students' planned commitments to work and to family. Fourth, we have little information about the meaning of time devoted to profession or to family by students. (Seeing patients or reading medical journals? Actively caring for children, or simply being at home on weekends?) Depending on how graduates define hours commitments, there may be some potential for combining work and family activities. Finally, we can only speculate that the specific-level measures will be better predictors of actual behaviors than will the global-level measures. We will not know for certain until we have completed in-progress follow-up studies with graduates of these classes in their early-career years.

Nevertheless, our findings have several implications. First, the apparent split between women's and men's preferences portends conflicts ahead for women and for men. If preferences for an equal balance of work and family persist beyond graduation, young doctors may become increasingly frustrated with intrusions of professional roles on private life. This may be especially true for young men, whose anticipated hours in family are lower than women's. They may find themselves at some future point lacking the involvement in family they apparently prefer.

Second, in absolute terms, the young doctors we studied plan heavy investments in both profession and family. The potential for role overload and the negative consequences associated with it exist for both men and women doctors. We find evidence of both a "superwoman" and a "superman" syndrome among new graduates.

Third, despite substantial similarities in women's and men's

orientations and patterns of development of these orientations during medical school, incipient bases for differential allocations by gender of professional and family responsibilities persist. Women more so than men are caught between what Coser and Coser (1974) term "greedy institutions." Greedy institutions demand undivided loyalty of members. Their dynamics press toward ever-increasing commitment and the breaking of ties to other arenas that compete for time and attention. Because of its service demands, medicine operates as a greedy institution for women and for men. The family operates in this manner only for women, these authors contend. Although balances of work and family roles will be problematic for all doctors, they apparently will be particularly stressful for women, who seem to expect to carry heavier shares of family responsibilities than do the men but who also seem to expect to carry a professional workload as heavy as that carried by the men.

REFERENCES

- Agassi, Judith. 1982. *Comparing Work Attitudes of Women and Men*. Lexington, MA: Lexington Books.
- Angell, Marcia. 1981. "Women in Medicine: Beyond Prejudice." *New England Journal of Medicine* 305:1129-1135.
- Angell, Marcia. 1982. "Juggling the Personal and Professional Life." *Journal of the American Medical Women's Association* 37:64-68.
- Barnett, Rosalind C. and Grace K. Baruch. 1985. "Women's Involvement in Multiple Roles and Psychological Distress." *Journal of Personality and Social Psychology* 49:135-145.
- Beer, William. 1983. *Househusbands: Men and Housework in American Families*. New York: Praeger.
- Bernard, Jessie. 1981. *The Female World*. New York: Free Press.
- Bluestone, Naomi. 1978. "The Future Impact of Women Physicians on American Medicine." *American Journal of Public Health* 68:760-662.
- Braslow, Judith and Marilyn Heins. 1978. "Women in Medical Education: A Decade of Change." *New England Journal of Medicine* 304:1129-1134.
- Broadhead, Robert. 1983. *The Private Lives and Personal Identity of Medical Students*. New Brunswick, NJ: Transaction Books.
- Brown, Roger L. and Lorayn Olson. 1986. "Distribution of Professional Time: Female and Male Physicians." Paper presented at the American Sociological Association meeting, New York, September.
- Bucher, Rae and Joan Stelling. 1977. *Becoming Professional*. Newbury Park, CA: Sage.
- Coser, Lewis and Rose Coser. 1974. *Greedy Institutions: Patterns of Undivided Commitment*. New York: Free Press.

- Coverman, Shelly. 1985. "Explaining Husbands' Participation in Domestic Labor." *Sociological Quarterly* 26:81-89.
- Deaux, Kay. 1984. "From Individual Differences to Social Categories: Analysis of a Decade's Research on Gender." *American Psychologist* 39:105-116.
- England, Paula and George Farkas. 1986. *Households, Employment, and Gender: A Social, Economic, and Demographic View*. New York: Aldine.
- Epstein, Cynthia. 1970. *Women's Place*. Berkeley: University of California Press.
- Fine, L. 1981. *Married to Medicine*. New York: Atheneum.
- Fishbein, M. and I. Ajzen. 1975. *Belief, Attitude, Intention, and Behavior*. Reading, MA: Addison-Wesley.
- Fowlkes, Martha. 1980. *Behind Every Successful Man: Wives of Medicine and Academe*. New York: Columbia University Press.
- Fox, Mary Frank and Sharlene Hesse-Biber. 1984. *Women at Work*. Palo Alto: Mayfield.
- Frieze, Irene, Jacquelynnne Parsons, Paula Johnson, Diane Ruble, and Gail Zellman. 1978. *Women and Sex Roles: A Social Psychological Perspective*. New York: Norton.
- Gerber, Lane. 1983. *Married to Their Careers: Career and Family in Doctors' Lives*. London: Tavistock.
- Gilligan, Carol. 1984. *In a Different Voice: Psychological Theory and Women's Development*. Cambridge, MA: Harvard University Press.
- Goode, William, 1980. "Why Men Resist." Pp. 131-150 in *Rethinking the Family: Some Feminist Questions*, edited by Barrie Thorne. New York: Longman.
- Grant, Linda, Louise Arnold, Ernest Blaustein, Donald Brown, Sheila Eder, and Leonard Meiselas. 1986. "Combined Premedical-Medical Programmes: Programme Structure and Student Outcomes at Four Universities." *Medical Education* 20:93-96.
- Heins, Marilyn, S. Smock, L. Martindale, J. Jacobs, and M. Stein. 1977. "Comparisons of the Productivity of Women and Men Physicians." *Journal of the American Medical Association* 236:1961-1964.
- Henley, Nancy M. 1985. "Psychology and Gender." *Signs* 11:101-119.
- Hochschild, Arlie R. 1983. *The Managed Heart*. Berkeley: University of California Press.
- Hood, Jane and Susan Golden. 1979. "Beating Time, Making Time: The Impact of Work Schedules on Men's Family Roles." *Family Coordinator* 28:575-582.
- Lein, Laura. 1984. "Male Participation in Home Life: Impact of Social Supports and Breadwinner Responsibility on the Allocation of Tasks." Pp. 242-250 in *Work and Family: Changing Roles of Men and Women*, edited by Patricia Voyandoff. Palo Alto: Mayfield.
- Light, Donald. 1980. *Becoming Psychiatrists*. New York: Norton.
- Lorber, Judith. 1984. *Women Physicians: Careers, Status, and Power*. New York: Tavistock.
- Mandelbaum, Dorothy R. 1981. *Work, Marriage, and Motherhood: The Career Persistence of Female Physicians*. New York: Praeger.
- McKee, Lorna, 1982. "Fathers' Participation in Infant Care: A Critique." Pp. 120-130 in *The Father Figure*, edited by M. O'Brien and L. McKee. London: Tavistock.
- Nadelson, Carole and Theodore Nadelson. 1980. "Dual-Career Marriages: Benefits and Costs." Pp. 91-110 in *Dual-Career Couples*, edited by Fran Pepitone-Rockwell. Newbury Park, CA: Sage.

- Pleck, Joe. 1985. *Working Wives, Working Husbands*. Newbury Park, CA: Sage.
- Rinke, Carlotta. 1981. "The Professional Identities of Women Physicians." *Journal of the American Medical Association* 245:2419-2421.
- Roeske, N. 1973. "Women in Psychiatry: Past and Present Areas of Concern." *Journal of Psychiatry* 130:1127-1128.
- Shuval, Judith. 1975. "From Boy to Colleague: Processes of Role Transformation in Professional Socialization." *Social Science and Medicine* 9:413-420.
- Spence, Janet T., Kay Deaux, and Robert L. Helmreich. 1985. "Sex Roles in Contemporary American Society." Pp. 149-178 in *Handbook of Social Psychology*. Vol. 2, edited by Gardner Lindzey and Elliot Aronson. New York: Random House.
- Weisman, Carol and Martha Teitelbaum. 1986. "The Work-Family Role System and Physician Productivity." Paper presented at the American Sociological meeting, New York, September.