Recent research indicates support for a meritocratic view of the persistent gender gap in physician incomes: Young male physicians continue to outearn young female physicians because they are located in more lucrative specialties and practices and work longer hours. Using a sample of 321 physicians married to physicians, regression analyses are conducted to examine the direct and indirect effects of gender on income. Although traditional human capital variables and structural labor market variables explain part of the income gap, family context variables explain much and call attention to the importance of the work-family interface in studies of physician income. Despite similar human capital investments and labor market locations, women married to physicians tend to do family, and men married to physicians tend to do career. The findings challenge a meritocratic view and suggest a closer look at the gendered assumptions of the institutions within which physicians reproduce and labor.

Inside Medical Marriages

The Effect of Gender on Income

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Much of the literature on gender differences in income applies explanatory models that fall on one side or the other of a long-standing divide between human capital theorists and structural theorists who examine labor market constraints (Becker, 1965, 1991; England, 1992; Jacobs, 1989; Lorence, 1987; Marini, 1989). In consequence, the value of family context measures is obscured in research on income differentials between women and men. Researchers ignore how family facilitates (usually his) or impedes (usually her) career (Moen, 1998). This article follows recent emphasis in the social sciences on developing new templates for career paths that include the

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work-family system and thus contributes to the growing body of research on the work-family interface (Han & Moen, 1999).

An examination of physicians married to physicians ensures that neither respondent nor spouse occupation will confound income differentials or distort the effects of human capital, structural, and family context variables. Although recent work suggests that physician pay is no longer based on gender because the direct effect of gender disappears when adjusting for hours worked, specialty, and practice setting (Baker, 1996), the data presented here reveal a powerful and indirect gender effect that works through a range of family context, human capital, and structural measures, including hours worked and specialty. Analysis reveals that objective measures of family strategy and structure (spouse work hours and spouse income) in combination with subjective measures of family strategy and structure (perceived sacrifice of work for family) increase the explanatory power of traditional models of gender differences in physician income. Importantly, the introduction of the meso- level variable sacrifice adds considerable explanatory power.

Despite relative parity in human capital investments, women and men in medical marriages still exhibit gender-specific patterns, especially when it comes to sacrificing career for family. Clearly, marriage to a physician has differential consequences for women and men. Women not only report more sacrifice, that sacrifice has major consequences for women's work hours and income. In contrast, men report less sacrifice, and their sacrifice does not have the same consequences as women's. In the following section, recent literature on gender inequality in earnings among the general population provides the framework for a review of earnings differentials among physicians. I pay close attention to the small but growing literature on dual-physician families, and I argue for the relevance of family context variables in studies of physician productivity. In particular, I highlight the importance of perceived sacrifice of work for family.

THEORETICAL EXPLANATIONS: GENDER AND THE ECONOMIC INEQUALITY OF PHYSICIANS

Despite a trend toward equality, income differentials persist between female and male physicians. Unadjusted net income for female physicians[1] averaged 69% of male income in 1995 compared with 66% in 1993 and 60% in 1984 (American Medical Association [AMA], 1997). Explanations for income inequality among physicians parallel the economic inequality literature for the general population, with two principal theories organizing the literature: Micro-level theories focus on the human capital individuals bring to

the labor market, and macro-level theories focus on the structural constraints individuals encounter in the labor market such as sex segregation and discrimination (Marini, 1989). A separate family literature focuses on the effects of family structure and process on the gendered experiences of women and men in the work world (Gerson, 1985; Hochschild, 1989, 1997; Potuchek, 1997; Risman, 1998). After reviewing human capital, sex segregation, and discrimination research specific to physicians, I discuss meso-level theory focused on the influence of family structure and strategy on physician work hours and income.

MICRO-LEVEL INFLUENCES: THE IMPORTANCE OF HUMAN CAPITAL

Grounded in neoclassical economic theory, a vast literature exists on how the personal attributes of workers account for earnings differentials (Becker, 1965, 1991). Although human capital theory exists in multiple forms, one underlying proposition suggests that people are paid on the basis of their productivity and job performance (Lorence, 1987). Performance is expected to vary according to education level, training, experience, and continuity of employment. However, controlling for these variables (separately and in combination) does not eliminate the effect of gender on income in the general population (Reskin & Padavic, 1994). Measures of human capital have explained between 44% and 3% of the pay gap between female and male workers (Tomaskovic-Devey, 1993; Treiman & Hartmann, 1981). In addition, research suggests that models incorporating human capital variables work differently for women and men (Maume, 1985).

As with the general literature on economic inequality, evidence suggests that female physicians have smaller net incomes at each level of experience when compared with male physicians (Silberger, Marder, & Wilke, 1987). Also, male physicians' income per hour and per visit are significantly higher than female physicians' at all stages of their careers (AMA, 1997) despite controlling for self-employed versus employee status, specialty, age, number of hours worked, and number of patients seen (Martin, Arnold, & Parker, 1988). Despite this evidence, some recent data suggest that the pay gap no longer persists among young physicians. Using a nationally representative sample of all physicians ≤ 45 years of age (in practice 2 to 9 years), Baker (1996)[2] found that gender differences disappear for physicians with 2 to 5 years of experience when adjusting for educational variables and personal characteristics as well as hours worked, practice setting, character of community, AMA membership, specialty board status, number of concurrent practices, and experience with malpractice. In other words, controlling for a range

of variables (both human capital and structural) eliminates the gender difference in income for young physicians with the same experience.[3] However, older male physicians (≥ 10 years experience) made an average of 17% more per hour than their female colleagues, even after adjusting for differences. Taking experience into account does not eliminate the gender difference in Bird's (1996) study.[4] Using nationally representative data, she found that sex remains the most powerful predictor of income even after controlling for experience and a range of other variables including foreign medical graduate status, specialization, practice setting, and board certification.

Whereas experience is generally captured as number of years in practice, we know that during those years women and men may experience career interruptions—days, weeks, and months taken off for childbearing and child-rearing responsibilities. Career interruptions are more common for female physicians than male physicians, and among female physicians, are more common for those who marry physicians (Tesch, Osborne, Simpson, Murray, & Spiro, 1992). And although intermittent employment is not as significant in explaining wage differences as human capital theory would lead one to expect (England, Kilbourne, Farkas, & Dou, 1988), this variable has not been sufficiently tested as a predictor of work hours or income for physicians.

In summary, human capital theorists view the earnings differential as, at least in part, the result of individual-level attributes that women and men bring to the table. The evidence is mixed, however. Skills clearly matter, and evidence suggests that if women and men bring the same education, training, and experience to the table, they will be paid the same regardless of gender. Even so, other data contradict this conclusion.

MACRO-LEVEL INFLUENCES: SEX SEGREGATION AND DISCRIMINATION

Structural explanations for the gender gap in pay are rooted in dual labor market theory and discrimination. In this section, I focus specifically on intraoccupational sex segregation, practice setting, and discrimination as potential macro-level influences on the pay gap between female and male physicians.

Sex Segregation

In 1985, more than two thirds of women in the U.S. civilian labor force worked in occupations that were 70% or more female (Jacobs, 1989). Because traditionally female jobs are less economically rewarded in our society, the sex segregation of occupations contributes greatly to economic in-

equality in the workplace (Bielby & Baron, 1986; Marini, 1989).[5] Furthermore, hierarchical or vertical segregation within the same occupations and occupational categories is evident, with women holding the lower status positions within traditionally male occupations (England & McCreary, 1987; Miller-Loessi, 1992; Reskin & Roos, 1990; C. L. Williams, 1989).

Differences in income between female and male physicians is partly attributed to a disproportionate number of women in lower status specialties (e.g., pediatrics and psychiatry) and practice settings. Female practitioners are more likely to be employees than owners and more likely to be located in patient-focused and clinically oriented medicine over research-focused and academically oriented medicine (Lorber, 1984; Martin et al., 1988). However, controlling for practice setting and specialization does not eliminate the income difference between male and female physicians (Bird, 1996; Ohsfeldt & Culler, 1986). In Bird's (1996) analysis, specialization explained 35% of the effect of being female on income (while holding other relevant variables constant), and practice type explained an additional 20%. In Baker's (1996) analysis, adjusting for specialization and practice setting reduces the male to female ratio for hourly earnings significantly, from 1.14 to 1.02.

Discrimination

Perhaps most difficult to model and measure is the construct discrimination. In traditional status attainment research, the residual effect is often identified as discrimination. Whereas neoclassical economists view the unexplained residual in gendered differences in earnings as the result of unmeasured characteristics affecting individual productivity left out of the equation (Glass, 1999), sociologists argue that discrimination based on sex motivates employers to pay women less than men even when the sexes perform the same work and although there is no consistent evidence that the aggregate productivity of women is lower than that of men (Glass, 1999; Tomaskovic-Devey & Skaggs, 1999). In addition, the devaluation of the work women do leads to comparable-worth discrimination, where employers underpay female workers in different (i.e., not predominantly male) but equally valued jobs. Researchers have estimated that comparable-worth discrimination accounts for between 5% and 30% of the pay gap (England, 1992). Contemporary pay scales persistently encode the belief that men deserve more money (and that women work for extra money) despite the passage of the Equal Pay Act of 1963 (Reskin & Padavic, 1994).

Does discrimination at work account for a portion of the pay gap between female and male physicians? Bird (1996) thought so. Despite including a range of human capital and structural variables in her analysis of the effect of gender on income, 39% of the effect remains unexplained. She concluded "that women have made only limited gains in this high status and well-paid profession underscores the continued barriers and constraints women face in pursuing nontraditional employment" (p. 56). In other words, a portion of the residual effect is due to discrimination. I argue that the inclusion of family variables in Bird's analysis would have done much to account for the unexplained 39%. Baker (1996) concluded that the differences in annual earnings between young male and female physicians in 1990 is fully explained by differences in hours worked, specialty, practice setting, and other characteristics. Significantly, he argued that explaining away the gender difference may be possible now because discrimination no longer keeps women from earning the same as men when working the same jobs, hours, and so on. Baker (1996) noted that discrimination may still be an issue for young physicians because it affects the specialty or practice setting one chooses. I argue that beyond the discrimination that gives direct rise to gender differences in specialty choice and practice type, there remains the sort of discrimination that affects years in training and experience, such variables "that are usually seen as voluntary, the result of free choices of women" (Jacobs & Lim, 1992, p. 451). It is clear that eliminating the direct effect of gender on income does not mean discrimination disappears. Discrimination may work indirectly through experience, training, specialty choice, and practice setting. Furthermore, as the next section makes clear, discrimination may exist when workplaces assume a particular kind of worker, an "ideal" worker free of caregiving responsibilities (Glass, 1999; J. Williams, 2000).

MESO-LEVEL INFLUENCES: HOURS WORKED AND FAMILY VARIABLES

Thus far, explanations for the pay gap between female and male physicians have fallen into the camps of individual attributes (micro level) or structural conditions (macro level). However, neither hours worked nor family context variables falls neatly into either camp. For example, do women work fewer hours because they prefer shorter workweeks or because their jobs limit hours? Do men choose spouses with fewer human capital investments so that their career takes precedence, or is marriage as an institution structured to promote men's careers and demote women's careers? This section details what I consider meso-level variables that mediate individual level

choice and structural constraint. Women and men in medical marriages choose professional and personal paths within the gendered contexts of the family and the institution of medicine.

Hours Worked

Reduction of work hours leads to lower earnings and negatively impacts one's chance of promotion (England & Farkas, 1986). However, studies of gender differences in income inequality have long documented the persistence of the pay gap even when controlling for hours worked (Reskin & Padavic, 1994). Moreover, several studies document that hours worked as a predictor of income is much stronger for women than for men (Goyder, 1981; Kemp & Beck, 1986; Maume, 1985), which suggests more attention should be given to this variable.

On average, female physicians work far fewer hours per week than male physicians (Bobula, 1980; Kletke, Marder, & Silberger, 1990). According to 1995 AMA data, women average 52.5 practice hours per week compared to men's 57.5 (AMA, 1997).[6] In their analysis of 1,091 obstetrician-gynecologists, Weisman and Teitelbaum (1987) found that married men work 7.54 hours more per week than married women. The differential in work hours is most often explained by family context. Weisman and Teitelbaum found that family variables (i.e., spouse employment; number of hours spouse works; spouse's occupation, education, and income; number of children; and the presence of preschool children) are more predictive of hours worked for women than for men. Other data indicate that in general, parenthood is associated with reduced hours for female physicians but not for male physicians (Grant, Simpson, Rong, & Peters-Golden, 1990). From their study of 204 physicians, Grant et al. (1990) concluded that fathers desire more hours with families but "seemingly experienced and acquiesced more often to self-imposed demands to work more hours and forfeit family time" (p. 46). This finding is consistent with Pleck's (1977) argument that men are pressured to give up family for work, whereas the opposite holds true for women.

Longitudinal research on 144 physicians by Lundgren, Barnett, and Gareis (1998) supported both micro- and macro-level explanations: Female physicians choose reduced work hours to ease family strain,[7] with physicians married to physicians "choosing" to work fewer hours than physicians not married to physicians (Brotherton & LeBailly, 1993),[8] but organizations benefit from recruiting and retaining women willing to work reduced hour schedules because they have more control over part-time workers. (See Jacobs and

Gerson, 2000, for an extended argument on the benefits to employers of a bifurcated workforce in which workers are either over- or underworked.)

Bringing the Family In

Recently, scholars have attempted to explicate the work-family system to better understand individual career trajectories and outcomes (Moen, 1998). Han and Moen (1999) argued that women's and men's occupational pathways are located in family trajectories and that gender figures prominently: "with marriage more significantly (and negatively) related to the orderliness of women's career pathways and spouses' employment more significantly (and negatively) related to the orderliness of men's" (p. 101). Using a coupled-careers model, they found that men's marital and family experiences have little influence on occupational pathways but that women's marital and family experiences strongly affect occupational pathways. Although their work suggests tracing the work and family pathways or trajectories of women and men over the life course, cross-sectional studies, such as the one this article describes, offer an immediate glimpse of how family arrangements affect the occupational careers of women and men. Specifically, the following section delineates the importance of capturing family experiences and spouse occupational experience in studies of occupational success. I argue that beyond marital and parental status are a set of objective and subjective indicators of family experience that prove powerful as predictors of income. Incorporating such variables helps move us beyond the myth of separate spheres (e.g., work vs. family) and allows a closer look at the links between gender, family experience, and work outcomes.

Marital and Parental Status

Despite their importance, variables that capture work-family linkages are rare in studies of income inequality. Sometimes researchers incorporate marital and parental status measures, and data suggest that being married and having children are positively associated with income for men and negatively associated with income for women (Jacobs, 1989; Rosenfeld, 1980; for evidence to the contrary, see Duncan & Corcoran, 1984; Rosenfeld & Spenner, 1992). For physicians, several studies document dramatically different relationships between women and men (Uhlenberg & Cooney, 1990; Weisman & Teitelbaum, 1987). Namely, female physicians make the most when they are single, and male physicians make the most when they are married with children.

According to Baker (1996), women's income as a percentage of men's is 98% for single female physicians with no children but only 65% for those married with children.[9] Baker's analysis does not allow us to assess the unique contribution of family variables to the gender difference in income and does not provide information on family arrangement. For example, male physicians are more likely to be married to stay-at-home spouses[10] and may work more to support their families than their female colleagues, who are more likely to be married to professional men. Furthermore, data indicate that male physicians married to physicians report lower personal incomes than male physicians not married to physicians (Sobecks et al., 1999). Hence, going beyond marital and parental status is key for understanding the income inequality between female and male physicians.

Beyond Marital and Parental Status: Other Objective Indicators

Multiple indicators of the physicians' family circumstances are necessary for understanding these variables' contribution to career outcomes. Weisman and Teitelbaum's (1987) study of obstetrician-gynecologists measured spouse employment, number of hours spouse works, and spouse's occupation, education, and income. Weisman and Teitelbaum also included number of children, the presence of a preschool child (or children), the number of intended children, and home responsibilities (for both household labor and child care). They found that family variables account for more of the gender differences in physician productivity than does practice structure. Also, the effects of family circumstances differ by gender and account for much of the gender difference in work hours. However, because their analysis is limited to obstetrician-gynecologists, the generalizability of findings and the importance of family variables relative to specialty are not known.

Spouse's occupation is another extension of standard marital and parental status indicators. The Tesch et al. (1992) survey of 602 female physicians in a large Midwestern city reported that female physicians married to physicians are twice as likely as female physicians not married to physicians to interrupt their careers for child rearing. In addition, these women had more domestic responsibilities and worked fewer hours than women not married to physicians. Because their study was limited to women, the question of whether the family arrangements of male physicians influence career outcomes and family responsibilities is unanswered. Even so, it is safe to conclude that marriage to a physician spouse reduces work hours for both male and female physicians and that the effect is stronger for women. In addition, having a physician spouse increases a woman's probability of interrupting career for family.

Beyond Marital and Parental Status: Subjective Measures

Clearly, the aforementioned research underscores the importance of family variables beyond marital and parental status. Objective indicators of family structure (spouse employment status, occupation, work hours, and income) prove instrumental for understanding why married men make more than married women, but subjective indicators are also key. For example, Mannheim (1993) examined the significance of work role centrality for income, and Marsden, Kalleberg, and Cook (1993) examined the effect of organizational commitment on income and labor market location. Both studies demonstrate the efficacy of subjective measures in income studies. One such measure is the self-reported experience of sacrificing work for family.

Few studies have investigated the extent to which perceived sacrifice of home versus career affects income by gender. Milkie and Peltola (1999) argued that "women's location in the social structure affords them less power and control in work and family spheres and likely contributes to a greater total workload, more sacrifices, and difficulties in balancing work and family" (p. 476.) A host of qualitative studies testify to this reality (Gerson, 1985; Hertz, 1986; Hochschild, 1989), but rarely do surveys capture the extent to which employees sacrifice work for home life. Milkie and Peltola (1999) attempted an objective measure of sacrifice but predicted feelings of success at work-family balance, not income.

Research suggests that for female professionals married to professionals, one career must be "sacrificed." Whereas the dual-career couples Hertz (1986) studied employed a wide variety of strategies for balancing work-family life, more often the burden of managing home life fell on wives, who then sacrificed career progress. A male respondent commented: "I don't think you can have a family and have two demanding careers. I think someone has to give . . . and it's [usually] the woman who has given it up." Qualitative data suggest that in dual-career families, women reduce hours to better cope with the second shift (Hochschild, 1989), a shift for which they are still primarily responsible.[11] In the recent study by Epstein, Seron, Oglensky, and Saute (1999), most of the lawyers who worked reduced hour schedules were women, and many of these women were married to lawyers or to men in professional jobs. About 80% of the women who worked part time cited child care as the principal reason for doing so. In a dual-doctor study, B. E. Johnson, Johnson, and Liese (1991) noted that 13 of their 42 respondents argued that one career must take precedence because having two equal careers was impossible. In most cases, the man's career took precedence: 19 of 21 women reported "significant career compromises" compared to 1 of 21 men.

The question of why women sacrifice must be framed carefully. As Lorber (1984) argued, using woman's "choice" to explain her lesser status assumes that career development is "under the total control of the individual, dependent only on individual attitudes, motivations and performance" (p. 3). Do women sacrifice more because they choose to do so, or does the structure of women's career paths (which certainly is not under their complete control) force employment patterns and family arrangements that figure sacrifice a more viable option for women than men? Finally, how is her "choice" conditioned by meso-level gendered interactions within the family? I return to these questions in the Discussion section.

AN EXAMINATION OF DUAL-PHYSICIAN COUPLES

Studies focused on dual-physician couples are rare; the few that do exist have limited generalizability to the United States because they were conducted abroad (Izraeli, 1994; B. E. Johnson et al., 1991; C. A. Johnson, Johnson, & Liese, 1992), are based on small samples (B. E. Johnson et al., 1991; Lorber, 1982), or are limited by gender (Tesch et al., 1992) and specialty (Brotherton & LeBailly, 1993; Weisman & Teitelbaum, 1987). Despite the limitations, there are several important findings. In a study of 42 dual-doctor couples in England, C. A. Johnson et al. (1992) found that women in dual-doctor marriages have lower incomes, work fewer hours, and sustain more career interruptions (including change of location) than men. Likewise, in her study of 136 dual-doctor couples in Israel, Izraeli (1994) found that money matters for household arrangements. Women who earned as much or more than their husbands had a more egalitarian division of labor in the home. However, because Izraeli had cross-sectional data, it is difficult to assess whether family arrangements affect earnings or vice versa. Lorber's (1982) face-to-face interviews with 20 dual-career doctor couples revealed that in couples older than 40, husbands' careers took precedence, whereas more mutual arrangements existed in younger couples.

In this study, I focus on physicians married to physicians because earlier research reveals the importance of assessing the income gap between women and men in work-homogeneous situations to isolate how much of the gap is due to gender discrimination (Kemp & Beck, 1986). In addition, comparing women and men in family-homogeneous situations helps isolate the effect of gender discrimination. Other work (Sobecks et al., 1999; Tesch et al., 1992) presented evidence that women married to physicians have different work and life circumstances than do women married to other professionals. Hence,

holding spouse occupation constant provides a cleaner look at how gender matters for physician income.

Besides the exclusive focus on physician couples, this study is distinguished from earlier studies in three other ways. First, most studies of physicians married to physicians are qualitative because they are based on small sample sizes (B. E. Johnson et al., 1991; Lorber, 1982); however, I have a sample large enough to conduct multivariate analysis, allowing for an empirical adjudication among several hypotheses. Second, as noted earlier, prior studies were limited to one training program (Grant et al., 1990), physicians from one specialty (Brotherton & LeBailly, 1993; Weisman & Teitelbaum, 1987), or physicians of one gender (Tesch et al., 1992). Third, national data banks on physicians rarely include any family variables (e.g., AMA Physician Masterfile does not contain marital or parental status); a few that do (e.g., Survey of Young Physicians) only ask marital and parental status, which have limited explanatory power and do not get at spouse's occupation, income, or subjective measures of one's commitment to family relative to work. Because the data presented here fill these gaps, the relative importance of family variables compared to more traditional human capital variables and work characteristics can be assessed.

This study examines the influence of gender and a host of other variables on income, including human capital variables (experience, training, and career interruptions), work characteristics (specialty and practice setting), work hours, and family context variables (number of children, average number of hours spouse works per week, spouse's income, and perceived sacrifice of career for family). The study has three principal goals. First, I use ordinary least squares (OLS) regression to examine the direct effect of gender on income. I expect objective and subjective measures, in combination with the newly emphasized family variables, to eliminate the direct effect of gender. Regression analyses will determine which variables or set of variables explain(s) most of the effect of gender on income. In addition, the question of which individual variables are the strongest unique predictors of income will be addressed.

Second, I incorporate path analyses to examine the indirect effects of gender. A path diagram highlights the exact variables through which gender flows and reminds us that discrimination can work indirectly. I expect to observe a significant indirect effect of gender on income and to depict gender working through a range of human capital, structural, and family context variables. Because path models are rare in studies predicting income, I rely on previous literature and theoretical arguments in structuring the model. A human capital approach might assume a different causal model, with income predicting sacrifice. Risman's (1998) work offered an alternative explana-

tion: Women sacrifice more not because men make more (or because women have different personality structures) but because cultural expectations and values both within the workplace and within families operate in gender stereotypic ways that, in turn, affect income. Hence, sacrifice is used as a predictor of income.

Third, I consider whether models developed to explain work hours and income work differently for men and women. Previous research (Maume, 1985; Uhlenberg & Cooney, 1990; Weisman & Teitelbaum, 1987) suggests they do and provides support for splitting the models by gender. Following this, I expect work hours to be more predictive of income for women than for men. Finally, although I predict that women sacrifice career for family more often than do men, I expect sacrifice will have similar consequences for female and male physicians. In other words, higher levels of reported sacrifice of career for family should result in reduced work hours and income for all physicians regardless of gender.

SAMPLE AND METHODS

SAMPLE

A 76-item survey instrument designed to collect information about physician careers and family life was mailed to a random sample of 2,200 physicians who graduated between 1980 and 1990 from the medical schools of Case Western Reserve University and the University of Cincinnati.[12] Using computer-generated random numbers, 100 physicians were selected from each of the 11 classes of each school. After pilot testing a preliminary version of the instrument with 20 full-time faculty physicians in the Division of General Internal Medicine at University Hospitals of Cleveland, confusing items were revised or eliminated, and the survey was approved by the Institutional Review Board in March 1995. The survey was administered four times between May 1995 and May 1996. The first, third, and fourth mailings consisted of a cover letter, the survey, and a stamped return envelope. The second mailing was a postcard reminder. Of the 2,200 physicians contacted, 1,248 (57%) responded.[13]

Because the study is based on a random sample of 2,200 physicians who graduated between 1980 and 1990 from two Ohio medical schools, it is not nationally representative. However, comparing the sample with selected sociodemographic and professional characteristics of the 213,966 physicians listed in the AMA Physician Masterfile (AMA, 1997) who graduated from

medical school between 1980 and 1990 does not reveal marked differences. Namely, women were slightly overrepresented in this sample, and there are modest but statistically significant differences between respondents and the national sample in mean age, race, and specialty (see Sobecks et al., 1999, for more information). It is important to note that the sample includes physicians residing in 40 different states and working in 18 different specialties. Nonresponse bias was evaluated using results from telephone interviews with 88 randomly selected physicians who did not respond to the survey. Fifteen questions from the full survey were asked, and 77% of the nonrespondents participated. Among married respondents, physicians did not differ significantly on age, gender, average number of children, specialty, personal income, and type of practice.

For the analysis in this article, a subsample of the 1,248 respondents was chosen, consisting of 321 physicians who indicated that their spouse has an M.D. degree. The subsample differs from the full sample in a few important ways. Namely, the full sample contains statistically significant gender differences on number of children and type of practice (see Sobecks et al., 1999, for more details), but the subsample does not. Because many (but not all) of the physicians interviewed are married to another respondent, this is not surprising. In addition to homogeneity by occupation and marital status (marriage to another physician), this sample is more homogeneous than the full sample in number of children and practice setting. Male physicians married to physicians have fewer children on average than men in the full sample; in addition, male physicians married to physicians are less likely to be in a private practice setting than are men in the full sample.

MEASURES

Dependent. In the first set of multiple regression analyses, income is the sole dependent variable. Respondents were asked to indicate their "approximate personal earned income" for 1995 by categories of $50,000. The dependent variable is a 5-category variable ranging from $0 to $49,999 (1) to ≥$200,000 (5).[14]

Intervening. In the path analyses, work hours is modeled as an intervening variable between the independent variables (discussed next) and income. Hours worked is based on one question. All respondents were asked how many hours they spent at work per week; this is a continuous variable in the regression models, ranging from 0 to 100 hours.

Independent. Human capital variables include years in practice, years in training, and months career was interrupted for child rearing. Because men have been more likely to extend training by choosing longer residencies and/or adding fellowships and because increases in training lead to higher incomes, I calculated a training variable separate from a years of experience (posttraining) variable. Past studies have used years since medical degree to represent experience, but this misses the longer training periods of some physicians relative to others. Years in training was calculated by adding the years spent in residency plus years spent in one or more fellowships. This is a continuous variable ranging from 1 to 10. Years experience is calculated by subtracting years in training from years since graduation with an M.D. This is a continuous variable ranging from 0 to 14. Because having an interrupted career can depress earnings, I include a variable for months interrupted for child rearing. Respondents were asked how many months (or years) they interrupted their career for child rearing. Years were recalculated as months, and this is a continuous variable ranging from 0 months to 96 months (for 1 respondent).

Sex segregation is captured by two measures. First, because the literature suggests that female physicians may sacrifice career success more than men because of their location in less prestigious specialties, I create a prestige ranking of specialties based on a scale created for use in a prior study (Hinze, 1995). Prestige categories were created by culling the relevant literature on the prestige of physician specialties and by using responses attained in interviews with physicians about the prestige of various specialties (see Hinze, 1995, 1999, for more information). The specialties are ranked from 0 to 5, with a higher score indicating higher prestige. Second, although practice type has 10 categories (academic, private solo practice, private practice with two to five M.D.s, private practice with more than five M.D.s, in training, HMO, government-based facility, hospital staff, other, and not practicing), prior studies reveal the importance of distinguishing between owners/self-employed versus employees. Consequently, I recoded this variable to one dichotomous variable capturing the extent to which one is a member of a private practice versus other.[15]

Hours worked, as noted earlier, is based on one question. All respondents were asked about how many hours they spent at work per week; this is a continuous variable in the regression models, ranging from 0 to 100 hours.

Finally, family variables include number of children, the average number of hours one's spouse works per week, spouse's income, and the extent to which one feels they have sacrificed work for family. Number of children is continuous and ranges from 0 to 6. Respondents were asked to estimate the number of hours one's spouse works per week; spouse hours is a continuous

variable ranging from 0 to 100. Spouse income is based on one question asking respondents to estimate how much one's spouse earns using increments of $50,000. As with respondent income, it is a 5-category variable ranging from $0 to $49,999 (1) to ≥ $200,000 (5). Finally, respondents were asked four questions about the extent to which they perceived they sacrificed career (i.e., income, practice, work hours, and availability to patients) for family. Response categories range from *very much* (4) to *not at all* (1).[16] The four variables measured by these questions were combined to form a sacrifice scale for use in the regression analyses; a factor analysis using principal components extraction and an orthogonal varimax rotation confirms the scale. The items created one factor with high loadings (all above .7); Cronbach's alpha = .85.

ANALYSIS AND RESULTS

DESCRIPTIVES

Table 1 details selected characteristics of the dual-doctor couples. In terms of human capital variables, on average, men in the sample have spent more years in training than women (5.27 years vs. 4.65 years; significant at $p \leq .001$). About 30 physicians in the sample were still in training during the data collection, so 30 respondents had 0 years experience, whereas about 39 respondents reported 10 or more years of experience. The mean experience for men is 4.84, and for women, it is 4.85; this is not a significant gender difference. Finally, on average, women report interrupting their careers for 8.5 months for child rearing; men report interrupting their careers for less than 1 month ($p \leq .001$).

In terms of structural variables or work characteristics, 21% of the physicians are located in the specialty of internal medicine or medicine subspecialties. In descending order of frequency, the top 10 specialties after internal medicine are: pediatrics (13.1%), surgery and surgical subspecialties (11.8%), family practice (10.0%), psychiatry (8.4%), anesthesiology (6.2%), ob/gyn (5.3%), radiology (5.0%), emergency medicine (4.0%), ophthalmology (3.4%), and pathology (3.1%). As shown in Table 1, specialty is statistically significant by gender. For example, whereas 18.8% of men are surgeons, only 5.8% of women are surgeons. In addition, although only 4.7% of the men are pediatricians, 20.3% of the women in the sample practice pediatrics. In general, women tended to be located in lower prestige specialties (e.g., psychiatry, family practice, and pediatrics), whereas men tended to be

TABLE 1: Descriptive Information of Key Variables

	*Men (*N *= 149)*	*Women (*N *= 172)*
Dependent variable		
Income (%)		
$0 to $49,999	8.5	20.6***[a]
$50,000 to $99,999	19.1	38.2
$100,000 to $149,999	31.2	27.1
$150,000 to $199,999	19.9	5.9
$200,000+	21.3	8.2
Independent variables		
Human capital variables		
Training	5.27 (1.97)	4.65 (1.66)**
Experience	4.84 (3.50)	4.85 (3.30)
Career interruption	0.75 (5.38)	8.51 (16.36)***
Structural variables		
Specialty (%)		
Anesthesiology	8.7	4.1***[a]
Dermatology	0.7	4.1
Emergency medicine	4.7	3.5
Family practice	10.7	9.3
Internal medicine	7.4	13.4
Internal medicine subspecialty	15.4	5.8
Ophthalmology	3.4	3.5
Pathology	3.4	2.9
Pediatrics	2.0	14.5
Pediatric subspecialty	2.7	5.8
Psychiatry	2.8	5.6
Radiology	1.2	3.7
Surgery	3.4	2.9
Surgical subspecialty	15.4	2.9
Public health	0.7	1.2
Ob/gyn	4.0	6.4
Rad/onc	1.3	0.0
Physical medicine and rehabilitation	0.7	0.6
Neurology	4.0	0.0
Occupational medicine	0.7	0.0
Other	2.0	1.7
Prestige	3.17 (1.55)	2.30 (1.58)***
Practice environment (%)		
Private solo	4.7	7.6
Private group (2 to 5 M.D.s)	27.0	19.9
Private group (more than 5 M.D.s)	14.2	15.2
Academic medical center	31.8	31.0
Group staff model HMO	2.7	5.8
Government-based	2.0	4.7
Hospital staff	0.7	1.2

TABLE 1: Continued

	*Men (*N *= 149)*	*Women (*N *= 172)*
Training	9.5	7.0
Not practicing	2.0	2.3
Other	5.4	5.3
Meso-level variables		
Work hours	56.23 (14.21)	41.89 (17.68)***
Family context variables		
Number of children	1.65 (1.30)	1.67 (1.14)
Spouse work hours	38.24 (21.31)	56.63 (16.64)***
Spouse income (%)		
$0 to $49,999	29.8	10.7***[a]
$50,000 to $99,999	33.3	22.6
$100,000 to $149,999	24.1	29.2
$150,000 to $199,999	5.7	12.5
$200,000+	7.1	25.0
Sacrifice for family		
Income	1.0 (0.94)	1.63 (1.09)***
Practice	1.01 (0.84)	1.41 (1.01)***
Work hours	1.26 (0.91)	1.69 (1.0)***
Patient availability	1.06 (0.89)	1.71 (1.12)***

NOTE: Mean age for the entire sample is 37.14 years. The sample is 90% White, 4% Black, 3.7% Asian or Pacific Islander, 1.6% Hispanic, 0.3% American Indian or Alaskan Native, and 0.3% other or unknown. Respondents have been married an average of 8.5 years.
a. Statistically significant gender difference applies to all categories.
** $p \leq .01$. *** $p \leq .001$.

located in higher prestige specialties (e.g., surgery and the surgical subspecialties). The difference is statistically significant at $p \leq .001$.

The majority of physicians report practicing in a private practice environment (44.2% total, combining solo practice with larger private practices). Approximately 31% report practicing in an academic medical center. About 4.4% of the sample work for HMOs, 3.4% work in government-based facilities, 8% of the doctors surveyed report being in training, 2.2% are not currently practicing, and 5% report other. Practice environment does not differ significantly by gender.

In terms of meso-level variables, physicians in the sample report working an average of about 48.5 hours per week. Gender differences are particularly salient here. Women report working 42 hours per week compared with 56 for men ($p \leq .001$). Whereas 38.2% of women report working fewer than 40 hours per week, only 7% of men report working fewer than 40 hours per week (data not shown). At the other end of the spectrum, 16.9% of women report working 60 or more hours per week compared to 44.3% of their male counterparts.

Turning to family context variables, note that mean number of children is 1.66; this does not vary significantly by gender. Approximately 22% of these physicians married to physicians report having no children. The gender differences in both spouse work hours and spouse income are striking and significant ($p \leq .001$). On average, men report their wives work 38 hours per week, whereas women report their husbands work 57 hours per week. Consistent with the work hours data, approximately 30% of men placed their wives' income in the lowest income bracket ($0 to $49,000) compared to 11% of women. At the other end of the spectrum, about 25% of women placed their husband's income in the highest income bracket ($200,000+) compared with 7% of men. Finally, women are much more likely to report sacrificing income, practice, work hours, and availability to patients for their families. Mean sacrifice scores are significantly higher for women for each category ($p \leq .001$).

Turning to income, almost 30% of physicians made between $50,000 and $99,999, followed by almost 29% at the next highest level of $100,000 to $149,000. However, income differs significantly by gender ($p \leq .001$), with 21.3% of the men in the highest income category ($200,000+) compared to only 8.2% of the women. At the other end of the spectrum, only 8.5% of the male physicians make less than $50,000 compared to 20.6% of the female physicians.

In summary, the sample includes slightly more women than men. Respondents tend to be White parents with a mean age of 37. Most of the respondents have been practicing for 4 to 5 years. A full range of specialties is represented in this sample. Most doctors earn more than $100,000 per year and work considerably more than 40 hours per week. Despite the structural parity exhibited here with both men and women having medical degrees and both men and women being married to physicians, I see marked differences in the relevant variables. Specifically, women work fewer hours, make less money, and perceive they sacrifice work for family to a greater degree than do men. Although there are no significant gender differences by practice, women physicians do tend to be located in lower status specialties compared with men; in addition, they have shorter training periods and more often report interrupting their careers for child rearing.

DIRECT EFFECT OF GENDER

To what extent are gender differences in income explained by gender differences in years in training, experience, interrupted career, specialty, practice environment, spouse work hours, spouse income, the number of children, work hours of respondent, and perceived sacrifice? Table 2 reveals the results

TABLE 2: Regression of Physicians' 1995 Income on Sex (Controlling for Interrupted Career, Experience, and Training), Prestige, Practice Environment, Family Context Variables, and Hours Worked

	Step 1	*Step 2*	*Step 3*	*Step 4*	*Step 5*
Gender	–.331***	–.238***	–.213***	–.079	–.033
Career interruption		–.215***	–.197***	–.106*	–.089
Experience		.337***	.261***	.308***	.307***
Training		.198***	.185***	.182***	.145**
Specialty prestige			.125*	.096	.086
Private practice			.323***	.290***	.305***
Number of children				.024*	.019
Spouse income				–.044	–.024
Spouse hours				–.153**	–.175**
Sacrifice				–.268***	–.223***
Work hours					.165**
R^2	.110	.253	.362	.426	.441
Adjusted R^2	.106	.242	.347	.404	.418
$N = 273$					

NOTE: Gender coded male = 1, female = 2; career interruption continuous in months; experience continuous in years; training continuous in years; specialty prestige ranked 0 = low prestige, 5 = high prestige; private practice is a dichotomous dummy variable, 1 = private practice, 0 = other practice environment; number of children continuous; spouse income (1995) categorically coded 1 = ≤ $49,999, 2 = $50,000 to $99,999, 3 = $100,000 to $149,999, 4 = $150,000 to $199,999, 5 = $200,000+; spouse hours continuous; sacrifice scale coded 1 = *not at all*, 2 = *a little*, 3 = *a fair amount*, 4 = *very much*; work hours continuous. Coefficients are standardized.
*$p \leq .05$. **$p \leq .01$. ***$p \leq .001$.

of a stepwise regression of income on each of these variables or groups of variables. Step 1 shows the zero-order relationship between gender and income, –.331. Step 2 incorporates, along with gender, straight human capital variables: years in training, previous experience, and interrupted career. The effect of gender on income controlling for years in training, years experience, and whether one's career was interrupted is –.238. Human capital variables explain about 28% of the effect of being female on income. Step 3 adds specialty prestige and practice environment to the model; together, they explain 8% of the effect of gender on income (controlling for Step 2 variables). Step 4 adds family variables: number of children, perceived sacrifice, spouse work hours, and spouse income. Together, these variables, while controlling for others in the equation, explain 40% of the effect of being female on income. Note that in Step 4, gender falls out as a statistically significant predictor of income. Other analyses (data not shown) reveal that both sacrifice and spouse work hours explain the gender effect. Finally, Step 5 adds hours worked to the equation and explains 14% of the effect of being female on income.

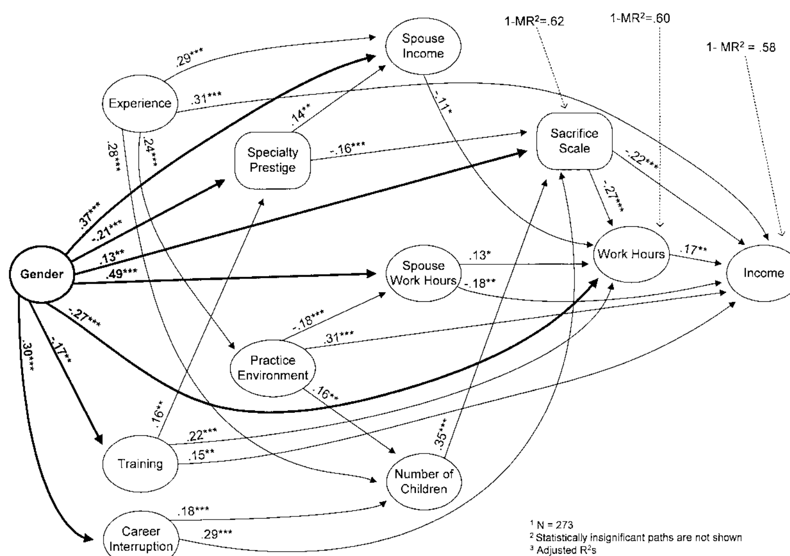

Figure 1: MD² Full Regression Model for the Full Sample[1,2,3,]

Controlling for gender, as well as all other variables in the equation, the strongest predictors in the full model are years experience, practice environment, and sacrifice. Those reporting more experience, a private practice environment, and less sacrifice of work for family have higher incomes.

Although the direct effect of gender disappears in Step 4 with the inclusion of family variables, I cannot conclude that gender no longer matters for physicians' pay. The next section details the indirect effect of gender by totaling the paths through which gender works to affect income. However, significant here is the improvement of this model, incorporating a range of family variables, on both the Baker (1996) and Bird (1996) models. Clearly, we see how important family context variables are for explaining the effect of gender on income. Individually, the strength of sacrifice and hours spouse works per week (when controlling for all other variables in the equation) demonstrate their importance along with hours worked, experience, and practice environment.

INDIRECT EFFECT

Although the direct effect of gender on income disappears, the path analysis presented in Figure 1 for all respondents reveals how gender works through

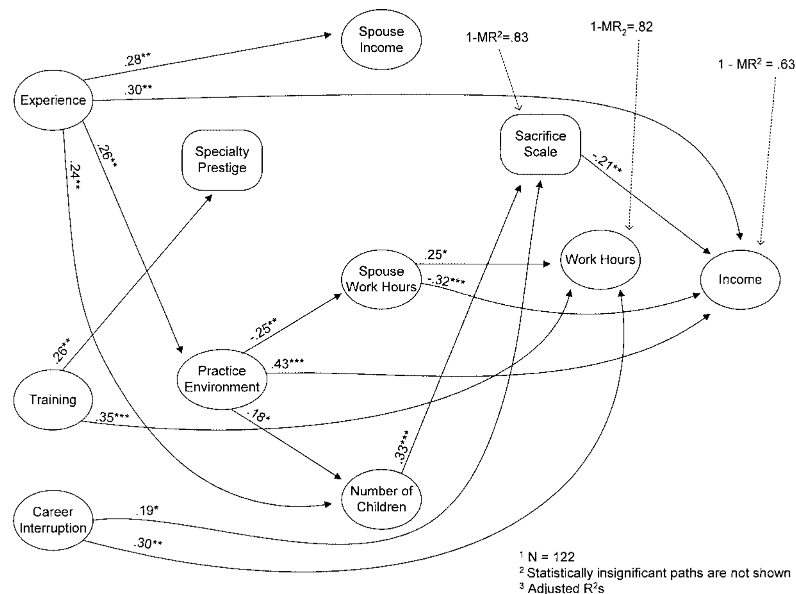

Figure 2: MD² Full Regression Model for Men Only[1,2,3]

other variables to affect income. Totaling all paths, the indirect effect of gender on income is –.177, which is still a considerable gender effect despite the elimination of a direct effect (data not shown; only statistically significant paths were used to calculate the indirect effect). Furthermore, note the strongest indirect effects, in order of importance, are training (–.037), sacrifice scale (–.036), and career interruption (–.029). In other words, these are the variables through which gender flows to affect income.

DIVERGENT MODELS

Han and Moen (1999), among others (Maume, 1985), argued that analysis split by gender reveals much about the different career/family trajectories of female and male respondents. Furthermore, preliminary analyses (data not shown) reveal statistically significant interaction terms. Consequently, I chose to split the path model by gender for ease of interpretation and because the results are visually striking (see Figure 2 and Figure 3). A caveat is in order: Because path models force a time ordering, I have entered variables into the equation in what I consider to be the logical temporal order. However, the cause and effect of some variables is debatable. For example, do spouse hours predict work hours, or do the hours one works predict the hours one's

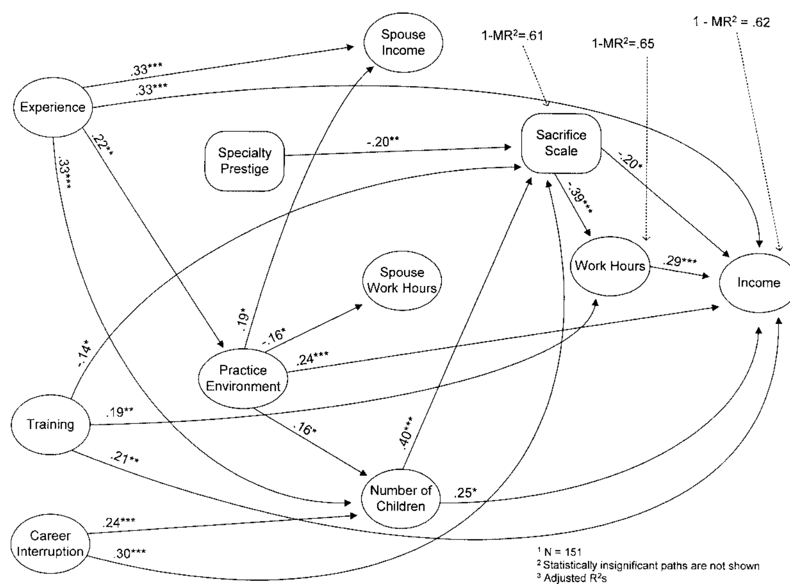

Figure 3: MD² Full Regression Model for Women Only[1,2,3]

spouse works? An approach grounded in economic maximization might view rational couples as choosing to specialize to maximize total household production. In this scenario, because husbands earn more, they specialize in income earning and wives specialize in housework and child care. Thus, income should predict sacrifice. In my model, sacrifice is used as a predictor of income because the research on the work/family interface rejects economic assumptions in favor of a model focused on how processes at work inside the family affect income. In addition, I assume a recursive model, but interactive effects are possible. For example, it is possible that spouse and work hours affect each other. In the section that follows, I step backward through the model and respectively examine predictors of income, work hours, and sacrifice for both men and women.

Income

Note that about 37% of the variance in income for men and 38% of the variance in income for women is explained (using adjusted R^2s). Examining direct effects only, for both men and women, years of experience is a significant predictor of income, as expected. More experience pays off in higher

income. The direct effect of sacrifice on income is negative for both men and women. In other words, those physicians who report higher levels of sacrifice of career for family have lower incomes. However, the similarities end there. Years in training is not a significant predictor of income for men but is for women (beta = .19; $p \leq .01$). Number of children accounts for variation in income for women (beta = .25; $p \leq .05$) but not for men. Spouse work hours is a significant predictor of income for men (beta = –.32; $p \leq .001$) but is not significant for women. Because the relationship is negative, the finding is that the more one's spouse works, the lower one's own personal income. Or, the fewer hours one's spouse works, the higher one's own personal income. For men, the direct effect of practice environment is the strongest predictor of income (beta = .43; $p \leq .001$). Men who are in a private practice make more money than men who are not. For women, the effect of private practice is weaker (beta = .24; $p \leq .001$) but significant. However, although one of the strongest predictors of income for women is work hours (beta = .29; $p \leq .001$), this variable does not emerge as a significant predictor of men's income. The more hours one works, the higher the income. Why does this not hold for men? I return to this question, along with others raised here, in the Discussion section.

Work Hours

Next, I examine predictors of work hours for male and female models. Because work hours is such a strong predictor for women, knowing what causes it to fluctuate is key. First, note that 35% of the variance in women's work hours is accounted for by the antecedent variables; however, for men, only 18% of the variance is explained. Second, only two variables have direct effects for women. Namely, years in training has a positive effect on work hours (beta = .19; $p \leq .01$), and sacrifice has a strong negative effect (beta = –.39; $p \leq .001$). For men, the effect of years in training is much stronger (beta = .35; $p \leq .001$), and the effect of sacrifice is nonexistent. If women report sacrificing career for family, it decreases their work hours (which, as we saw earlier, has a powerful effect on income). However, men's sacrifice does not affect work hours (and, as noted earlier, work hours do not affect income for men). The question of why men's sacrifice does not result in reduced work hours will be addressed in the Discussion section. The other variables predictive of work hours for men are spouse hours (beta = .25; $p \leq .05$) and career interruption (beta = .30; $p \leq .01$). For men, the more hours one's spouse works, the more hours they work. For women, there is no relationship between spouse hours and work hours. And for men, career interruption is

positively associated with work hours but is not at all associated with work hours for women.

Sacrifice

Finally, I compare how predictors for sacrifice differ by gender. Note that the antecedent variables for sacrifice for men explain only 17% of the variance, but for women, they explain 39%, or more than twice the variance. This suggests that work and family characteristics are more salient as predictors of sacrifice for women than for men. There are four other important findings related to sacrifice. First, number of children remains the most important predictor of sacrifice for both genders but is stronger for women. Second, specialty prestige is a significant predictor of sacrifice for women (beta = –.20; $p \leq .01$) but is not associated with sacrifice for men. Women in higher prestige specialties are less likely to sacrifice than women in lower prestige specialties, whereas the prestige of men's specialty does not affect the extent to which they sacrifice. Third, years in training is a significant negative predictor of sacrifice (beta = –.14; $p \leq .05$) for women but is not significantly associated with sacrifice for men. Women who have more years of training are less likely to sacrifice career for family independent of other variables in the equation. Finally, career interruption is positively associated with sacrifice for both women and men but is stronger for women.

In summary, using a full model with all respondents to predict sacrifice, work hours, and income is misleading. The models work differently for women and men. For women, sacrifice is better explained by family and work characteristics and plays an important role in predicting both work hours and income. For men, the most important predictor of income is years of experience. Number of hours worked is irrelevant, and sacrifice is less relevant for understanding the variance in income for male physicians. The evidence presented here suggests that the experiences of women and men in the same occupation married to spouses in the same occupation differ markedly.

DISCUSSION

Explanations for income inequality are important because they "speak directly to the issue of whether inequality is meritocratic, whether markets are efficient, and whether our society is fair" (Jacobs, 1995, p. 9). Recent research (Baker, 1996) supports the meritocratic view of income difference: Young male physicians continue to outearn young female physicians because they work longer hours in more lucrative practice settings and specialties.

Women who make the same "choices"[17] as men about work hours, practice, and specialty earn the same income. My data challenge the meritocratic argument and suggest a reframing: Women's income disadvantage must be understood in the context of family interactions and a gendered profession.

The data presented here show strong relationships between human capital investments (training, experience, and career interruptions) and income and between labor market location (specialty and practice setting) and income. Specifically, micro-level human capital variables explain about 28% of the effect of being female on income, whereas macro-level structural factors explain about 8%. Importantly, the introduction of the meso-level variable sacrifice adds considerable explanatory power. Spouse work hours and sacrifice together explain about 40% of the effect of being female on income. But the data also reveal that women with the most human capital investments located in the highest prestige specialties are less likely to sacrifice career for family than are women with fewer human capital investments located in lower prestige specialties. Clearly, human capital investments and labor market location help predict level of sacrifice. In turn, sacrifice has powerful consequences for the work hours and income of women.

Even with similar human capital investments and labor market positions, the data show that men are more likely to do career and women are more likely to do family. In effect, they are doing gender (West & Zimmerman, 1987). How is this gender divide accomplished? Instead of viewing the economic inequality between female and male physicians as a matter of personal choice or differential investments, a theoretical lens including meso-level variables encourages more careful examination of the gendered assumptions of family life and medical culture and the intersection between the two. Sacrifice captures one such meso-level interaction inside medical marriages and is connected to micro and macro contingencies. Differences in human capital investments within marriages shape the gendered face of sacrifice, and institutional arrangements affect women's location in part-time roles—recall the earlier findings of Lundgren et al. (1998) that employers benefit from having reduced-hour employees. Women sacrifice more and work less because the institutions within which they reproduce and labor operate from an inherited set of gendered cultural expectations, and these expectations play out in women's daily interactions.

Certainly, gender expectations at the individual level contribute to income inequality. For example, men in medical marriages may expect their wives to spend more time at home, and women in medical marriages may expect their husbands to work longer hours and earn higher incomes. However, even in marriages where egalitarian motivations and expectations exist at the level of the individuals, gender inequality persists (Gerson, 1985; Risman, 1998).

Consequently, it is important to look beyond individual-level expectations and interaction within families and to recognize that the individuals studied here interact within a gendered profession long structured as if workers had domestic wives. Obviously, such structure disadvantages men and women who do not (Risman, 1998). Historically, professional men have been free from private duties and responsibilities, including care of home and family (Seron & Ferris, 1995; J. Williams, 2000). Granted, physician men married to physician women have less freedom to pursue professional success than physician men married to housewives, but the data reveal the remarkable tenacity of gendered patterns despite similar human capital investments. The findings here support Moen's (1998) contention that women's and men's occupational pathways are located in family trajectories and, at the same time, prompt a closer look at institutional assumptions and arrangements. As Glass (1999) noted, workers who do not fit the ideal worker profile (e.g., free of caregiving responsibilities, geographically mobile, and constantly available for work) are seriously disadvantaged.

Following Han and Moen (1999), I found a gendered interface between family and work, evident through the use of separate models for women and men. In terms of those divergent models, a few findings warrant careful discussion. First, I found that for men, spouse hours are negatively related to income. Men whose spouses work fewer hours make more money—perhaps to compensate for the lower earning spouse. Or, do women reduce work hours because men make more? With cross-sectional data, the question is difficult to answer, but notice that a similar relationship does not exist for women. Women whose spouses work fewer hours do not earn more than women whose spouses work more.

Second, women's hours on the job are closely linked to income, but men's hours on the job are not. The strong association between work hours and income for women has been documented in other studies (Maume, 1985). This relationship might be explained by women's disproportionate location in hospital-based or institutional situations with fixed salary and fixed hour arrangements (Lorber, 1987; Relman, 1980) and fewer opportunities for managerial promotion (Maume, 1999). Although practice setting is measured (with no real gender differences), the measure does not capture the extent to which salary arrangements might vary by gender.

Third, the variance in women's work hours is more accounted for by variables in the model than the variance in men's work hours, and most of the variance is explained by sacrifice. Women's greater sacrifice translates into reduced work hours, but men's does not. Perhaps sacrifice has different meanings for men and women. For women, sacrificing career for family results in cutting back at the office, whereas for men, it means forgoing extra

activities outside the working day (e.g., attending conferences and spending informal time with colleagues). Sacrificing such activities might directly impact income but not actual hours on the job. Perhaps for men, sacrificing means not putting in extra hours beyond the normal workday, whereas for women, it means reducing the normal workweek.

The findings presented here only begin to articulate the complex gendered relationships between family context, cultural expectations, and the institution of medical work. The data presented here make clear the importance of incorporating micro-, meso-, and macro-level variables into analyses for a fuller understanding of the persistent gender gap in income. In addition, future investigations would do well to more fully explicate how gender figures in the work hours-income relationship and in the meanings of sacrifice.

CONCLUSION

In this article, I have examined the relative contributions to income of a range of human capital, structural, and family context variables. This research extends previous work in an important way. To explore the work-family interface, I incorporate a range of variables not usually included in studies of income disparities. Sacrifice and spouse work hours are the most important of these family context variables, and they prove powerful additions to our understanding of income inequality. The data presented here capture what other studies of income inequality have missed: the persistent indirect effect of gender on income. Whereas gender works through a range of human capital, structural, and family context variables, the effect of gender on training, sacrifice, and career interruptions is particularly strong. These variables, in turn, have strong effects on both work hours and income.

The principal contribution of this study is the illumination of several indirect paths, namely sacrifice, through which gender influences income. However, the success at eliminating the direct effect of gender does not mean discrimination is absent. Evidence suggests that discrimination plays a role in the location of women in less prestigious specialties (Hinze, 1995, 1999; Lorber, 1987). Also, discrimination in compensation exists; specialties that are predominantly female and those requiring nurturing skills are consistently devalued (England, Herbert, Kilbourne, Reid, & McCreary, 1994). Because women spend fewer years in training and more training is associated with higher incomes, discrimination in obtaining subspecialties or pursuing fellowships may be key for understanding income inequality. Last, independent of all other variables, gender has a powerful effect on work hours. Women work fewer hours than men, and it is possible that either covert or overt dis-

crimination hinders women's ability to log hours.[18] Because discrimination may lurk in the indirect effects, it is important to have carefully designed studies focused on the experiences of female and male physicians in a variety of settings.

In addition to the need for further exploration of discrimination, the aforementioned findings suggest several avenues for future research. First, because perceived sacrifice of work for family has such a strong negative relationship to income for women, understanding the processes at work inside the marital relationship would be instructive. Do participants in medical marriages feel one career has to take precedence? How do they decide which career? Do family decisions about who should cut back hinge on the gendered meaning of breadwinning (Potuchek, 1997)? Understanding how satisfied marital partners are with their current arrangements would help researchers determine whether the economic inequality uncovered here should be considered problematic.

Second, it will be important to develop a coupled-careers model that directly addresses the multiple interfaces between work and family and between women and men over time (Han & Moen, 1999). For this, we need couples-level data so we can measure how human capital investments vary between spouses. A closer examination of within-marriage trade-offs in line with Becker's (1991) work might prove fruitful. (However, recent research by Blossfeld, Drobnic, and Rohmer, 1996, suggests that the logic of comparative advantage in human capital investments does not drive the gendered division of labor in West German households.) Although I limited the sample to physicians married to physicians, knowing whether the same patterns hold for dual-professional couples in general is necessary.

Last, the data indicate that limitations in national data sets (few family context variables) have led to truncated analyses. Despite excellent data on physician careers, the AMA Masterfile does not routinely include questions about physician families. And sociologists have been particularly cautious about implying that for women, family may interfere with or lead to lesser careers. Sociologists hesitate because of the real and justifiable fear that such findings may be used against women in the workplace. Certainly, past evidence reveals employers' reluctance to hire and promote women with children because employers assume these women are less productive, a process called *statistical discrimination* (Bielby & Bielby, 1988; Tomaskovic-Devey & Skaggs, 1999). The data here reveal that for women in dual-physician marriages, a process occurs by which they sacrifice career for family to a greater extent than do men. This sacrifice has major consequences for productivity. Longitudinal qualitative data might help us get at this process—and the extent to which personal choice, family constraints, societal expectations,

and workplace stereotypes and expectations contribute to women's "decision" to sacrifice career. In other words, future research would do well to examine how gender is socially constructed as a fundamental feature of medical marriages and medical work. In addition, a longitudinal model could illuminate how income inequality shifts over time[19] and would help clarify the causal ordering used in the path analysis.

Until larger social structural changes are implemented allowing for greater flexibility in shaping interlocking career and family trajectories, couples may find that pursuit of two orderly, successful careers may be "logistically and pragmatically elusive for all but the most resourceful and determined" (Quick & Moen, 1999, p. 19). Uncovering the kind of structures best suited for coupled careers requires innovative research designs that blend career data from workers with company data from their employers to better examine how worker career preferences intersect with workplace policies to create and sustain gendered workplaces (Knoke & Ishio, 1998).

Whereas some evidence suggests that government measures can alter opportunity structures so that women are less likely to sacrifice career for family (Trappe, 1996), others (Hofferth, 1996) conclude that state policies are not significantly associated with maternal employment behavior but that employer policies are.[20] For physicians, do workplace policies have an effect on the extent to which women sacrifice work for family? Also, is there variation by practice setting, either in terms of size of practice or type of practice?[21] There can be no doubt that gender will be an important part of any further investigation of physician income inequality. Attention to indirect effects and family context variables contributes much to explication of the relationships between gender, work, and family—without this information, the development of effective policy measures is impossible.

NOTES

1. Nonfederal physicians, excluding residents.

2. Baker's (1996) primary data come from the 1991 Survey of Young Physicians, sponsored by the Robert Wood Johnson Foundation. Interviews were completed with 6,053 physicians (a 70% response rate).

3. I cannot discern the independent effects of education level and training from Baker's (1996) analysis.

4. Bird's (1996) income data are from the 1987 annual Physician Monitoring System telephone survey of all physicians providing at least 20 hours per week in patient care. Data from approximately 4,000 physicians are included in her study.

5. Treiman and Hartmann (1981) estimated that between 35% and 39% of the gender gap in wages can be explained by the sex segregation of occupations.

6. A comparison of ideal versus actual work hours in a national sample of the general population proves revealing (Jacobs & Gerson, 2000). Approximately 80% of women and men working more than 50 hours per week (meaning most physicians) desire fewer working hours.

7. Tolbert and Moen (1998) argued there is little direct evidence to support the claim of human capital theorists that women trade income for jobs with shorter or more flexible hours. In general, however, we know that because women continue to bear the disproportionate burden of child care, household chores, and caring for the elderly, part-time or reduced-hour work schedules are a strategy women use to reduce overload (Parcel & Cornfield, 2000).

8. Estes and Glass (1996) found little evidence that women trade wages for family-accommodating features (e.g., reduced hours). Furthermore, they argued the importance of distinguishing between women with high versus low levels of human capital. Women with higher levels of human capital (similar to the physicians in this sample) are generally rewarded by good compensation and family accommodations.

9. A comparison of Baker's (1996) 1990 data with Uhlenberg and Cooney's (1990) 1980 data reveals much improvement in the span of a decade. On average, women living alone made 74% of what men made; women living with a spouse and children made about 52% of men's earnings.

10. Using 1980 census data, Uhlenberg and Cooney (1990) found that 64% of male physicians have stay-at-home spouses compared to almost none of the women (no exact percentage given). More recent evidence suggests this is changing. In the full sample from which this study derives (Sobecks et al., 1999), approximately 47% of the married male physicians have stay-at-home wives compared to 9% of the married female physicians.

11. Potuchek (1997) argued that women are more likely to cut back, in part, because they and their partners define men as breadwinners.

12. Primary investigators were Nancy Sobecks, M.D., and C. Seth Landefeld, M.D. (see Sobecks et al., 1999, for more detail). Dr. Sobecks initiated the project as a resident at Case Western Reserve University during her research rotation; Dr. Landefeld supervised the project.

13. Response rates varied from 42% to 62% for different classes and were higher for graduates of Case Western Reserve University than for graduates of University of Cincinnati.

14. Income categories were chosen because previous research reveals higher completion rates for surveys using categorical over open-ended response categories; clearly, a continuous variable is preferable.

15. Preliminary analyses with several dummy variables for practice setting added no new information and proved unwieldy in path analyses. A better measure of practice setting would distinguish between physicians who are employees versus managers or administrators in both private practice and nonprivate settings. (Thank you to an anonymous *Work and Occupations* reviewer for this suggestion.)

16. Respondents were asked: "To what degree have you made sacrifices in the following professional/career areas for the sake of your marriage/partnership/children?" As subjective measures, they are not measures of the true sacrifice exhibited by the physicians. This becomes problematic if women overestimate sacrifice and men underestimate sacrifice because the links between sacrifice and income are altered. Furthermore, the sacrifice questions assume that limiting one's professional role for family purposes is a sacrifice. However, women and men may limit time at work for family but might not consider this a sacrifice. A more objective question would have used a more neutral term than *sacrifice*, perhaps then asking a follow-up question about whether they consider the work limitation a sacrifice. In other research, measuring one's *identity* or *commitment* relative to work and family (Bielby & Bielby, 1989) has been fruitful.

17. Baker (1996) recognized that a host of factors, including family responsibilities and limited opportunities, condition "choices" about medical specialty, practice setting, and hours

worked. J. Williams (2000) argued that the notion of personal choice for explaining women's family and work decisions is a dangerous one:

> The human capital literature is a classic "choice" argument, which leaves domesticity outside the frame of reference. Once the analysis of domesticity is added back in, we see that women's "choice" takes place in a context that requires of ideal workers the social power available to men, to relocate their families, for example, or to enjoy a flow of family work most fathers but few mothers enjoy. (p. 84)

18. A closer examination of the gender disparity in the effect of work hours on income suggests the importance of information on physician choice of practice setting (Bird, Lang, Chertoff, & Amick, 1999; Lundgren, Barnett, & Gareis, 1998).

19. A comparison of change in income over time (between 1990 and 1995; data not shown) is revealing for the women and men studied here. Women's income is more likely to stay the same or decline slightly, whereas men's income is more likely to increase. There is no gender difference in a comparison of single physicians, and the difference is less for married physicians not married to physicians. However, a longer view is needed because other evidence suggests that by age 40, female doctors see as many patients as do men and that by age 60, they are nearly three times as likely as men to practice full time (Heins, 1985).

20. Of course, as Hochschild (1997) so eloquently demonstrated in *The Time Bind*, companies may have family-friendly work policies, but the larger cultural climate (in which face time matters most) keeps employees, especially male employees, from using them. And, as Sandberg and Cornfield (2000) made clear in their study of the termination of family leaves, gender-neutral policies do not result in gender-neutral practices (also see Fried, 1998).

21. In their study of radiology, Bird et al. (1999) found more part-time physicians in larger practices, academic practices, and those affiliated with larger organizations.

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