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Jerry A. Jacobs & Sarah E. Winslow

THE ACADEMIC LIFE COURSE, TIME PRESSURES AND GENDER INEQUALITY

In this paper we examine time pressures facing faculty members in the USA, especially assistant professors. We consider whether the strategy of sequencing life events, specifically 'tenure first, kids later', is a viable strategy for faculty today. We draw from the 1998 National Survey of Post-Secondary Faculty, which includes data on over 10,000 full-time professors in US universities. We examine the amount of time faculty work on a weekly basis. We then consider the ages of assistant professors. We also document the prevalence of dual-career marriages in academia. Next we document the patterns of parental responsibilities among assistant professors, and examine the impact of marital and parental status on time devoted to professional responsibilities. We also discuss the impact of time pressures on job satisfaction. This analysis is designed to highlight the challenges of designing more family-friendly professional positions without recreating or reinforcing gender disparities in earnings and professional status.

Keywords working time; work–family conflict; academic careers; job satisfaction; academic productivity

En este artículo, examinamos las presiones de tiempo que se les plantean al profesorado de las universidades en los Estados Unidos, especialmente a los profesores adjuntos. Consideramos si es viable o no para la facultad de hoy la estrategia de ordenar las circunstancias de la vida, específicamente 'primero la titularidad, después los hijos'. Recurrimos al 1998 National Survey of Post-Secondary Faculty, que incluye datos de más de 10,000 profesores de tiempo completo en universidades de los EEUU. Examinamos la cantidad de tiempo que los profesores trabajan cada semana. Después consideramos las edades de los profesores adjuntos. También documentamos la preponderancia en el mundo académico de matrimonios donde ambos tienen carreras profesionales. Luego documentamos los patrones de responsabilidades de los padres entre los profesores adjuntos, y examinamos el impacto de la condición matrimonial y paternal/maternal sobre el tiempo dedicado a las responsabilidades profesoriales. También debatimos el impacto de las presiones de tiempo sobre la satisfacción laboral. Este análisis intenta

poner de relieve los retos involucrados en estructurar puestos profesionales que son mas favorables a la familia sin recrear or reforzar disparidades relacionadas a género de ingresos y estatus profesional.

Palabras clave hora laborable; conflicto de la trabajar–familia; carreras académicas; satisfacción profesional; productividad académica

Is academia family-friendly, or are the job expectations so high that it is difficult to combine academic jobs and responsible parenting? Is it possible for most professors to wait until after earning tenure to have children? Are parental leave policies likely to impact a small minority of faculty, or do such policies potentially address the needs of most faculty? Does having children substantially reduce the time faculty devote to their jobs? These are among the questions we address in this paper.

In examining these questions, we seek to combine the framework developed by Jacobs and Gerson's analysis of working time with a life course perspective and apply them to the experiences of individuals in one prominent occupation. Jacobs and Gerson (2004) maintain that the longest workweeks in the USA are found among professionals and managers. They also suggest that the challenges of balancing work and family are concentrated among dual-earner couples, and consider not only the average workweek but the proportion working long hours.

In this paper, we consider how life course and working time patterns are manifest in one profession, namely faculty. We begin by briefly reviewing research on both faculty and work–family sequencing, followed by an outline of our research questions. Then we proceed to present findings from the 1998 National Survey of Post-Secondary Faculty. In the course of presenting these results, we situate the results for the academic profession in the context of time trends for other professional and managerial occupations in the USA, and we also note several distinctive aspects of working time in the US public-policy environment. The concluding sections of the paper discuss some ideas for reducing the time demands of academic positions.

Our research is premised on several underlying frameworks. First, we seek to understand barriers to gender equality in the workplace. In the university context, we suggest here that the demanding nature of academic jobs combines with the gender segregation of academic fields to contribute to reduce the representation of women as tenured faculty. A second underlying motivation is to assess the impact of work demands on family life. We do this by examining the length of the workweek for individual faculty. We also consider the dual-career aspects of academic families in order to obtain a fuller picture of the pressures confronting academic families. A third premise guiding our research is that particular facets of work settings support or constrain work–family choices. By better understanding the nature of work in specific occupations and organizations, we will be better able to develop strategies to help reduce work–family conflict. A fourth and final guiding motivation is to understand how work–family issues unfold over the life course. Phyllis Moen (2003) and her colleagues have emphasized the unfolding of work–family challenges over the course of the lives of individuals and couples. By taking the age (and not simply the marital and parental status) of assistant professors into account, this research attempts

to assess whether there are certain pressure points in the life course that are especially challenging, and, in this case, potentially detrimental to women's attainment of an academic career.

Research on faculty working patterns

Previous research on post-secondary faculty in the USA is largely centred on three major issues: (1) time allocations and productivity; (2) employment status (part-time vs. full-time); and (3) salary. While there is a fairly substantial body of literature on how much time faculty devote to teaching relative to research (see, for example, Clayton, 2000; Fairweather & Beach, 2002; National Center for Education Statistics, 1997; Olsen, Maple, & Stage, 1995; Singell, Lillydahl, & Singell, 1996), there is remarkably little research on faculty working time in general. Furthermore, discussion of rank appears almost exclusively in research on promotion and tenure; little research examines the differing experiences of faculty at varying career stages.

While research investigating the impact of family status on the careers of faculty members exists, this relatively small body of literature is limited in focus (mainly to discussions of time allocation and the gender gap in tenure status) and scope. For example, Bellas and Toutkoushian (1999) find that marital status and the number of dependants do not affect the share of time devoted to teaching and research but do reduce the number of hours worked per week, lending support to the argument that family demands limit the time that faculty can give to work activities. Furthermore, recent research suggests that 'early' parenting (having a child while an assistant professor or earlier) reduces women's chances of receiving tenure by 20–25 per cent, while early parenting has a slight positive effect on men's chances of promotion (Mason, *in press*). While the academic productivity of research scientists has received a sizeable amount of attention (see, for example, Ginther, 2001; Long, 2001; Xie & Shauman, 2003; Zuckerman, Cole, & Bruer 1991), research on the work–family issues confronted by women (and men) in other disciplines, at less prestigious institutions, and in non-tenure-track positions is scarce.

We attempt to build on the research in this area by performing analyses directed at addressing the following research questions: Are the work demands of full-time faculty positions compatible with raising a family? Given that professional occupations often demand excessive work hours and that family responsibilities tend to constrain one's ability to be exclusively devoted to employment, is it possible for young academics to sequence their work and family decisions so as to limit this conflict? That is, can junior faculty members delay having children until after they have achieved tenure, when (theoretically, at least) the most demanding years of their career are over?

In order to answer these questions, we apply a life course perspective to the work and family experiences of a nationally representative sample of American faculty. Two major themes in life course research are particularly salient for the current project. First, a life course orientation holds that various life domains (such as work and family) are interconnected. The life course concept of 'linked lives' refers to the linkages among the various domains of an individual's life over his or her life course (Elder, 1994; Moen, 2003). This perspective provides a framework

for investigating the dynamics of multiple, interdependent pathways. Specifically, this concept implies that one's work life and one's family life are inextricably linked and that one's life path develops in relation to other members of his or her social network. Finally, a life course approach assumes that men and women plan and make decisions based on the choices available to them (Elder, 1994). This implies that individuals are 'planful', making choices among a set of options available to them (Elder, 1994).

A life course perspective does not, however, imply that individuals seamlessly flow from one stage to the next. To the contrary, this framework captures the dynamic aspects of life trajectories, highlighting the way in which individuals respond to constraints and opportunities. Moen and colleagues (2003), for example, investigate the strategies (defined as the choices individuals and couples make under constraining conditions) dual-earner couples use in order to manage their work and family obligations amidst the 'hidden infrastructure of time' that permeates jobs and career pathways. They cast doubt on the traditional notion that the 'lock-step life course' is a natural, inevitable, or feasible option (see Moen and Sweet (2002) for a further discussion of the lock-step life course).

In this analysis we focus on assistant professors, a group likely to face both the time constraints Jacobs and Gerson (2004) find among professionals and managers and the 'hidden infrastructure of time' posited by Moen and colleagues (2003). We analyse both the time constraints faced by faculty and the age distribution of assistant professors in order to determine whether it is feasible to wait until tenure to have children. We examine the proportion of assistant professors with children, and consider the impact of marital and family status on working time. The last section of the results presents information on the time pressures and other aspects of job satisfaction reported by faculty.

Data

The data analysed in this paper were drawn from the 1998 National Study of Postsecondary Faculty (NSOPF), administered by the National Center for Education Statistics of the US Department of Education. The survey, designed to collect information on faculty and other instructional staff in institutions of higher education, is currently the most comprehensive study of post-secondary faculty.¹ This cross-sectional survey has been administered three times: during the 1987–88, 1992–93, and 1998–99 academic years. The 1998 wave of the NSOPF was designed and conducted by the Gallup Organization.

The NSOPF has two components: a survey of faculty and a survey of the institutions in which they were employed. In 1998, 960 colleges and universities, representing all public and private not-for-profit degree-granting institutions in the 50 states and the District of Columbia, were included in the institutional sampling frame. The faculty sample was drawn from the 819 colleges and universities that responded to the institutional survey. Of the final eligible faculty sample of 19,213, a total of 17,600 respondents completed the faculty questionnaire, for a response rate of 83.2 per cent.

For the present analysis, the sample was restricted to those faculty members at four-year institutions who considered their academic appointment to be their primary job and who did not spend the majority of their time in administrative activities.² This resulted in a final sample size of 11,162 faculty members, of which 10,092 were full-time. We also selectively report from the 1992 administration of the same survey.

One important limitation of the NSOPF is that it does not solicit information on the spouses of faculty members. We partly fill this gap by drawing on data from married couples in the 1990 Census where either spouse reported their occupation as 'postsecondary teacher'.

Results

We organized the presentation of results into four topical areas. We begin by presenting an overview of the faculty workweek. We then turn to an examination of the age profile of assistant professors. Next we consider the marital and parental statuses of assistant professors and their consequences for working time and gender equality. Finally we present our results on time pressures and job satisfaction for assistant professors.

The faculty workweek

Professors in the USA put in very long hours. Table 1 reports the average workweek and the percentage working long hours (50 or more hours and 60 or more hours) by rank, institution type and gender. Full-time male faculty report working 54.8 hours per week on average; their female counterparts report working almost as many hours (52.8 hours per week). Working time is up slightly since an earlier administration of this same survey was conducted in 1992 (an increase of 1.8 hours per week for men and 2.8 hours per week for women), although inconsistencies in the survey questions raises uncertainties about this point.³

Long hours are not restricted to faculty at elite research universities but are evident among professors working in liberal arts and other institutions as well. Faculty in research institutions report working the longest hours (an average of 55.8 for men and 54.0 for women), but the average workweeks of full-time faculty in other institutions follow this standard quite closely. For example, male full-time faculty in liberal arts colleges work 54.0 hours per week, and their female counterparts put in 53.4 hours per week. Both male and female full-time faculty at all institutional groups average above 50 hours per week.

Assistant professors work long hours, but so too do tenured associate and full professors. Full-time faculty at all ranks put in over 50 hours per week. Even lecturers and instructors put in over 50 hours per week. It may be that hours decline after tenure but that this is offset by differential attrition. In other words, it is possible that the assistant professors that actually make it to tenure work 60 hours per week, and then cut back to 55 post-tenure. The data suggest that there is no change, but that is because the short-hour assistant professors are no longer in the picture. One would need longitudinal data to assess this possibility. However, one

can conclude from the available data that time pressures do not disappear after professors are awarded tenure.

Male assistant professors put in slightly longer hours than do their female counterparts (55.8 hours per week for the men vs. 53.5 hours for the women). For men, there is a slight post-tenure slump with the length of the workweek declining by two hours, only to rise again for full professors. For women, the workweek actually grows steadily as they advance from the ranks of assistant to associate to full professor. (The increments are about three quarters of an hour for each of these steps.) It may be that as women age out of their childbearing years, and are less likely to have young children at home, they have slightly more time to devote to their careers.

Extra-long workweeks are common. Overall, more than two thirds of full-time faculty (69.3 per cent) put in over 50 hours per week, and over one third (36.2 per cent) put in over 60 hours per week. These two generalizations hold for both men and women at each rank of standing faculty (Assistant, Associate and Full Professors).

The gender gap in working time for assistant professors is a bit sharper among those working 60 plus hours per week. Men are more likely to put in more than 60 hours per week as assistant professors (43.2 per cent for men vs. 33.5 per cent for women). This may contribute to men having a greater likelihood of obtaining tenure, if this time is used efficiently.

The work patterns of professors reflect broader trends in working time in the USA. Jacobs and Gerson (2004) report that professionals and managers (both male and female) in the USA work more hours per week than do those in other occupations. They also note that the proportion working more than 50 hours per week has increased over the last 30 years, and that the gap between college-educated and other workers has grown over time.

While professors in the USA do not stand out with respect to other professionals, they appear to be more distinctive with respect to their peers in other countries. Jacobs and Gerson (1998, 2004) report that the USA stands out as the country with the largest fraction of the labour force reporting working 50 or more hours per week. For example, they find that less than eight per cent of employed men in Sweden and less than two per cent of employed women report working more than 50 hours per week.

The data presented in table 1 represent far longer workweeks than Jacobs and Gerson found in any of the 10 countries they studied. Indeed, the proportion of male assistant professors in the USA who report working more than 60 hours per week far exceeds the proportion of men in the labour force working more than 50 hours per week in any of the countries Jacobs and Gerson included in their study. The proportion of women assistant professors working more than 60 hours per week is several times higher than the proportion of women working more than 50 hours per week in any of Jacobs and Gerson's comparison countries.

Assistant professors: age profile

Most academic positions in the USA feature a 'promotion or exit' structure. In other words, after a probationary period, typically of seven years, the junior faculty

TABLE 1 Average weekly total hours for full-time faculty by sex, rank, and institution type

	<i>average weekly hours</i>		<i>% 50+ hours</i>		<i>% 60+ hours</i>	
	<i>men</i>	<i>women</i>	<i>men</i>	<i>women</i>	<i>men</i>	<i>women</i>
All	54.8	52.8	72.2	63.4	38.1	32.5
Rank						
Full	55.3	55.1	74.4	71.8	39.2	41.2
Associate	54.0	54.3	71.3	67.0	34.5	36.5
Assistant	55.8	53.5	75.5	68.5	43.2	33.5
Instructor/ lecturer	51.8	48.8	55.3	46.7	32.1	22.2
Other rank/no ranking system	54.4	49.8	69.2	50.5	35.6	20.4
Institution						
Research	55.8	54.0	75.5	67.1	41.9	35.4
Doctoral	55.5	52.1	73.7	62.2	38.6	30.3
Comprehensive	52.7	51.8	63.8	59.5	30.9	30.3
Liberal arts	54.0	53.4	72.0	65.1	36.4	35.3
Other	55.3	51.7	76.5	59.7	40.4	25.6

Source: 1998 NSOPF.

member may be invited to join the permanent faculty with the promise of lifetime job security; alternatively, he or she is directed to leave the institution. The review process is generally conducted during the sixth year of the assistant professor's appointment. The promotion from the rank of assistant to associate professor thus typically occurs at the end of the sixth year, and is accompanied by lifetime tenure. (However, we will see below that these 'typical' patterns do not hold in all cases.) This promotion process is routinely referred to as 'getting tenure'.

The strategy of delaying childbearing until after receiving tenure is quite appealing, in that the most demanding phase of childcare would occur after the pressure and risk associated with being an untenured assistant professor is completed.⁴ But clearly this strategy depends on getting tenure relatively early in life. This poses an important empirical question: how old are assistant professors? Is it realistic to wait until after being awarded tenure to have children, if that means waiting until after age 35, 40 or even 45 to have children?

The average age for male assistant professors is 42.4; for women, it is slightly older at 43.7. These results are displayed in table 2, which tabulates the average age of faculty by rank and sex. These data suggest that most assistant professors are too old to wait until receiving tenure to have children. These figures were higher than we expected and we conducted a series of more detailed analyses to better understand these results.

TABLE 2 Average age by sex, employment status, and rank

	<i>full-time</i>	
	<i>men</i>	<i>women</i>
Full professor	56.3	54.1
Associate professor	49.6	49.6
Assistant professor	42.0	43.4
Instructor/lecturer	44.4	44.8
Other rank/no ranking system	46.6	44.5

Source: 1998 NSOPF.

Table 3 displays the age of assistant professors by field of specialization, along with data on the age of receipt of PhD. The average age of assistant professors is higher in some fields, such as education and nursing, than others, such as the physical sciences. But the average exceeds 37 years of age in all of the academic specialties. Thus, the dilemma of whether to wait until tenure to have children is a daunting one in all areas of academia.

A second notable finding presented in table 3 is that the average age of degree attainment is well over 30—33.4 for men and 35.5 for women. Again, there is variation between fields, with faculty in some fields such as education, obtaining their degrees much later in life than in other fields, such as architecture and engineering. Nonetheless, in all fields the average age for doctoral degree recipients is at least 30. As a result, questions about getting married and having children before achieving tenure, whether that is when one is in graduate school, holding postdoctoral fellowships or other temporary positions, or as an assistant professor, arise in all fields of academic specialization.

While these are cross-sectional data, one may make some life course inferences about these data. For example, women obtaining PhDs in the physical sciences are slightly younger than their male counterparts (average age of 30.2 for women vs. 31.4 for men). It is probably the case that few women in this area are having their children in advance of their PhD, since there is no evidence of a slow down relative to their male counterparts. In other fields, such as the arts and humanities, education and biological sciences, women are obtaining their doctoral degrees two or more years after their male counterparts. Childbearing in advance of the degree may well be the explanation for these differences.

A third notable finding is that assistant professors have been at their current institution for an average of just over three years. This figure is exactly what one would expect given a six or seven year tenure clock, but it leaves several years unaccounted for. In other words, age at degree plus years at current institution does not add up to the respondent's current age. To better understand this gap, we calculated the number of years post-PhD not at the respondent's current institution by specialty. This information is displayed in the last column of table 3. In some fields, like biology, respondents typically worked five or more years at another institution, presumably as a postdoctoral fellow, before starting as an assistant

TABLE 3 Average age, age at degree, and years at institution, by sex and field for assistant professors

	A. age		B. age at highest degree		C. years at institution		D. difference [A - (B + C)]	
	men	women	men	women	men	women	men	women
All	42.0	43.4	31.8	33.9	4.2	4.7	6.0	4.8
With PhD	40.7	41.9	33.4	35.5	3.3	3.2	6.0	3.2
Without PhD	44.2	45.6	29.0	31.3	5.7	6.9	9.5	7.4
Biological sciences	40.5	39.8	31.4	30.2	3.1	3.8	5.0	5.8
Physical sciences	37.7	37.8	30.6	31.6	2.7	3.2	4.4	3.0
Medicine/dentistry	41.4	42.2	29.1	31.7	3.9	4.8	8.4	5.7
Nursing	—	50.3	—	43.9	—	6.6	—	(0.2)
Other health fields	41.6	42.6	30.8	36.2	3.8	2.1	7.0	4.3
Architecture/engineering	39.6	35.1	32.8	30.0	2.5	2.7	4.3	2.4
Business	39.9	41.3	35.1	36.3	2.4	3.1	2.4	1.9
Computer science/math	39.5	40.9	32.9	35.6	3.7	2.3	2.9	3.0
Social sciences	40.3	39.9	34.1	34.3	3.2	2.6	3.0	3.0
Education	45.0	46.4	36.9	39.6	3.1	3.6	5.0	3.2
Arts and humanities	41.9	40.3	32.3	35.1	4.7	2.9	4.9	2.3
Vocational fields	48.6	—	35.8	—	5.5	—	7.3	—
Other fields	41.1	43.1	34.2	36.9	2.8	3.1	4.1	3.1

Note: Dash indicates that there were too few cases to calculate a meaningful average.

TABLE 4 Rank, tenure status, and age, by sex

	<i>men</i>			<i>women</i>		
	<i>full</i>	<i>associate</i>	<i>assistant</i>	<i>full</i>	<i>associate</i>	<i>assistant</i>
A. Tenured and tenure-track status, by rank and sex						
Tenured	91.4	76.9	9.9	87.5	74.0	10.7
Not tenured, but on track	2.0	11.0	59.2	1.4	11.7	57.5
Not on tenure track	4.0	7.9	24.1	7.4	8.6	25.0
No tenure track	2.6	4.2	6.8	3.7	5.7	6
B. Average age by rank, tenure status, and sex						
Tenured	56.4	49.7	51.8	54.5	49.9	50.7
Not tenured, but on track	53.2	45.8	40.0	51.3	49.0	41.3
Not on tenure track	56.2	52.1	42.8	49.8	48.7	44.3
No tenure track	54.0	51.8	42.5	54.9	49.2	46.1

Source: 1998 NSOPF.

professor. The number of years elapsed before starting as an assistant professor is much lower in other fields, including business and the social sciences. Thus, the fact that assistant professors are often in their late 30s or early 40s is due to a combination of obtaining the doctoral degree in their early 30s with several years in postdoctoral fellowships or temporary positions after the receipt of the degree.

The analyses presented thus far assume that assistant professors are untenured but on a tenure track, while associate and full professors are all tenured. However, this assumption warrants empirical investigation. Table 4 displays the percentage of faculty by rank and tenure status (a four-category measure consisting of the following statuses: tenured, on a tenure track but not yet tenured, not on a tenure track, and at an institution where no tenure track is available).

One important finding in table 4 is that tenure as an institution is not universal. The great majority of full professors report that they occupy a tenure position, but 8.6 per cent of the men and 12.5 per cent of the women do not. For most of these, they are not on a tenure track or there is no tenure at their institution. For this group, whose average age is over 50, progression up the academic ladder to the rank of full professor was not accompanied by tenure.

For associate professors, roughly one quarter (23.1 per cent of the men and 26.0 per cent of the women) are untenured. Just over one in 10 (11.0 per cent of the men and 11.7 per cent of the women) at the associate level are on a tenure track and still waiting to receive tenure. Thus, the age analysis presented above understates the age conflict because it does not include these untenured associate professors. As we see

TABLE 5 Marital and parental status of full-time assistant professors, by sex

	<i>men</i>	<i>women</i>
Married with children at home	51.8	35.2
Married without children at home	25.1	28.8
Single with children at home	6.6	12.0
Single without children at home	16.6	24.0

in the second panel of table 4, these tenure-track associate professors are typically in their late 40s (average age of 45.8 for men and 49.0 for women). Clearly for this group, waiting until tenure to have children is not a viable strategy.

The notion that ‘assistant professor’ is synonymous with ‘untentured’ and ‘tenure track’ is not supported by these data. Indeed, just under three in five assistant professors fit this description. The results for assistant professors raise a number of interesting issues. First of all, roughly one in 10 assistant professors (9.9 per cent of the men and 10.7 per cent of the women) has already received tenure. The average age of this group is over 50 (average age of 51.8 for men and 50.7 for women). The inclusion of this group in the figures presented above tends to inflate the average age of assistant professors, but the effect is not that large. One might prefer to focus on the average age of tenure-track assistant professors. In table 4 we see that, even for this group, the average age of assistant professors is quite high (40.0 for men and 41.3 for women).

A second important finding in table 4 is that there is a very large minority of assistant professors who are not on a tenure track. Just over one in three (30.9 per cent of men and 31.8 per cent of women) assistant professors is not on a tenure track. The average age of this group is a few years older than for tenure-track assistant professors. For this group as well, the strategy of ‘tenure first, kids later’ is also not viable. These data certainly raise concerns about the erosion of tenure as an institution.

Age and marital status of assistant professors

Given this age distribution, it is not surprising to find that many assistant professors do indeed have children⁵ (see table 5). A majority of male assistant professors (58.3 per cent) have children at home, compared with just under half (47.3 per cent) of female assistant professors. This differential may reflect female academics’ concern that having children will slow down their careers to a much greater extent than would be the case for their male counterparts. Women faculty also tend to have their children later than men. For example, for faculty between age 30 and 34, nearly half (48.8 per cent) of men had children at home, compared with 31.9 per cent of women (results not shown). This gender gap narrows as women have their children at older ages. Female faculty are more likely to be single parents (12.0 for female

TABLE 6 Weekly hours for full-time assistant professors, by sex and family composition

	<i>average hours</i>		<i>% 50+ hours</i>		<i>% 60+ hours</i>	
	<i>men</i>	<i>women</i>	<i>men</i>	<i>women</i>	<i>men</i>	<i>women</i>
Married with children at home	56.3	52.5	76.3	66.0	42.1	28.7
Married without children at home	55.2	53.7	73.0	66.6	43.7	32.1
Single with children at home	52.1	50.9	75.3	66.9	32.9	28.0
Single without children at home	53.4	56.1	77.0	75.4	49.8	45.1

assistant professors vs. 6.7 per cent for male assistant professors), as is evident in table 5. The 50-plus hour workweeks and the pressure of trying to meet the standards of tenure are thus combined with parenting for a substantial fraction of assistant professors. These data make it clear that parental supports, including parental leave policies, are not a peripheral issue affecting only a small fraction of faculty but rather are policies that are likely to affect the broad majority of assistant professors.

How do marital and parental status affect the time that faculty devote to their profession? Assistant professors in all marital and parental statuses work an average of more than 50 hours per week, but some predictable gender differentials (and a notable reversal) are evident. We present results on this issue in table 6, which displays the average hours and per cent working long hours for assistant professors by their marital and parental status. Marriage and motherhood create a modest deficit in working time for women among assistant professors, but even married mothers work over 50 hours per week. Among assistant professors, married mothers work 52.5 hours, compared with 56.3 hours for married fathers. Among married women, women without children work about an hour more than their female counterparts who have children, while childless married men work about an hour less than do fathers. Even single parents (both single mothers and single fathers) who are assistant professors put in over 50 hours per week. Among single childless assistant professors, women put in longer hours than men on average (56.1 for women vs. 53.4 for men). The time squeeze among assistant professors is thus endemic. We repeated this analysis just for assistant professors who are on a tenure track and the results were similar to those reported here.

The impact of marriage and children on women is more evident when the focus is on the proportion working 60 hours per week or more. Over 40 per cent (42.1 per cent) of married men with children put in over 60 hours a week as assistant professors vs. less than three in 10 (28.7 per cent) women. It should be noted that working 60 hours a week may not be efficient, and may not result in improved odds of securing tenure. However, if there is a connection between hours spent and total productivity (not hourly productivity), then the extra hours available to male assistant professors may well give men an advantage in getting tenure. This may help to explain a portion of the slow progress women have been making in entering the ranks of tenured faculty.

TABLE 7 Faculty and spouse employment patterns

	<i>men</i> (<i>n</i> = 2,540)	<i>women</i> (<i>n</i> = 1,042)
Per cent with employed spouse	71.4	91.8
Per cent with full-time employed spouse	56.2	88.5
Of those with employed spouses:		
Per cent married to another faculty member	12.5	18.2
Per cent married to professional or manager	70.7	69.5
Total hours in paid employment, both partners	84.1	89.3
Per cent couples working 80+ hours	71.3	87.5
Per cent couples working 100+ hours	17.3	25.4

Notes:

1. Faculty are defined as occupations 113–154 in 1990 Census: teachers, post-secondary (all fields).
2. Ego is full-time faculty (working 35+ hours per week).
3. Partner employed is defined as those reporting they are employed and working at least one hour per week for pay.

Source: US Census of Population, 1990.

Data from the 1990 Census help us to fill in a portion of the dual-career aspects of faculty's weekly schedules.⁶ The census data indicate that dual-earner couples are common in academia, with fully employed partners more typical of female faculty than of their male counterparts. A large fraction of full-time faculty are married to other full-time employees. As we see in table 7, just over half (56.2 per cent) of married male faculty and nearly all (88.5 per cent) of married female faculty have spouses working full-time. Women faculty are more likely to be married to male faculty (18.2 per cent vs. 12.5 per cent), but the partners of both groups are typically professionals or managers (69.5 per cent for female faculty, 70.7 per cent for male faculty). For married faculty, both partners combined put in long workweeks (84.1 hours per week on average for male faculty vs. 89.3 per cent for female faculty). A sizeable minority are in couples devoting 100 plus hours per week to paid employment (17.3 per cent for men vs. 25.4 per cent for women).

Thus, the time pressures faced by academics need to be understood in the context of dual-career marriages and not simply in terms of the professor's own very demanding job. Jacobs and Gerson (2001, 2004) have underscored the importance of viewing paid working time in terms of the total amount of time that husbands and wives jointly put in. Once one recognizes that the 50 or 60 hour workweek of most academics is complemented by long workweeks put in by their partners, the time pressures faced by assistant professors, especially those with young children, become hard to discount.

TABLE 8 Job satisfaction for full-time faculty members, by sex

	<i>men</i>		<i>women</i>	
	<i>all full-time faculty % dissatisfied</i>	<i>assistant professors % dissatisfied</i>	<i>all full-time faculty % dissatisfied</i>	<i>assistant professors % dissatisfied</i>
Overall job satisfaction	15.2**	17.9	18.2**	20.9
Workload	30.4	34.7	35.5	39.8
Time for working with students	20.2	19.1	23.3	25.0
Time for keeping current in one's field	45.1	50.5	52.5	56.2
Time for class preparation	21.7	20.7	26.8	28.6

**Difference between assistant professors and other faculty is statistically significant, $p < 0.01$.
 Source: 1998 NSOPF.

Time pressures and job satisfaction

Overall job satisfaction levels among faculty are quite high (see table 8). Among full-time faculty, only 15.2 per cent of men and 18.2 per cent of full-time women report being somewhat or very dissatisfied with their jobs. Overall satisfaction levels among assistant professors are lower than among other professors, but the differences for the specific satisfaction items are not statistically significant. Items involving time pressures are prominent causes of job dissatisfaction for faculty. A sizeable minority of faculty are dissatisfied with their workload. And, despite all the hours they work, faculty often feel that they do not have enough time to keep current in their field.

Most faculty report being satisfied with the time they have to spend with students and the time they have to prepare for classes. The more common complaint is that there is not enough time to keep current in one's field. This problem is reported by 44.6 per cent of male and 51.5 per cent of female faculty. Women are especially likely to report being dissatisfied with their workload (38.1 per cent of women vs. 24.6 per cent of men). This reflects not only the hours they work but the scarcity of stay-at-home husbands. Women are less satisfied than men for all items except 'keeping current in one's field', for which high levels of dissatisfaction are evident for both genders. Thus, professors' chief complaint is that after working 55 hours per week, they feel frustrated by not being able to spend enough time keeping up to date in their specialty. In short, the demands of the job, especially in terms of research, are perceived as essentially unlimited.

We explored the issue of 'workaholism' further by examining satisfaction levels of assistant professors who work 60 or more hours per week (results not shown in table 8). Over two in five of the men in this group (40.6 per cent) and just under half (49.8 per cent) of the women were dissatisfied with their workload. These are higher levels of dissatisfaction than among other assistant professors. Thus, we may

infer from the responses to this question that not all of those who put in very long hours are happy about doing so. Instead, it seems that they feel they must put in these long hours in order to meet the lofty expectations of the academic calling, not because they necessarily enjoy working to the exclusion of all other aspects of life.

Conclusions

Faculty positions are demanding in terms of time, energy and commitment. Professors work long hours. The great majority work at least 50 hours per week. This is a long workweek by national standards in the USA, even compared with many other demanding professional and managerial positions, and is very long by international standards. The demands of faculty positions are not limited to assistant professors but are experienced by associate and full professors as well. And the long workweeks are not confined to leading research institutions but are common in liberal arts colleges and other colleges and universities as well.

But the length of the faculty workweek does not tell the whole story because the clear majority of married faculty are part of dual-career couples. This is common for married male faculty and is nearly universal for married female faculty. The total hours of paid employment per week in faculty families typically exceed 80 hours and it is not unusual for the family workweek to exceed 100 hours. And, after all of those hours, faculty often feel that they did not have enough time to really finish their work. Faculty often report not being able to keep current in their field. In short, the demands of faculty positions often feel essentially limitless.

Assistant professors are often in their late 30s and early 40s. Unable to wait any longer to start their families, many assistant professors have children. As best as we can tell from these cross-sectional data, female professors cut back their workweeks slightly upon the arrival of children while male faculty do not. Even single mother assistant professors report putting in over 50 hours per week. In other words, faculty positions are so demanding that assistant professors feel that cutting back their workweek substantially would be too risky. And the relatively small concessions that mothers of young children make may nonetheless be sufficient to derail some women from garnering tenure. This could be due in part to reduced professional time and effort and in part due to the over-reaction to motherhood on the part of some male colleagues. In other words, we should not necessarily assume that a motherhood effect is completely attributable to productivity differences.

In this paper we considered the viability of the strategy of waiting until after tenure to have children. We found that this approach was unlikely to be viable for many faculty because so many remain untenured through their late 30s and early 40s. It should also be noted that associate and full professors also put in long hours, so the idea that professors reduce their work effort substantially after receiving tenure is not supported in these data.

The NSOPF data thus suggest that parental leave policies are not a matter of concern to a small minority but rather represent an effort to address a central challenge confronting the great majority of assistant professors. We believe that these results underscore the importance of making such policies available and of developing

ways to increase their use. The risk that taking a parental leave will signal the absence of career commitment needs to be addressed.

But we believe that these data also indicate that parental leave policies by themselves will not be enough. The challenges of being a responsible and engaged parent do not end after three or even six months but endure for many years. At the same time, the demands of academia are seemingly endless. We need to develop some ways to define a limit on the demands of the academic calling. A way must be found to reduce the unrelenting appetite of academia, in order to achieve a better integration of mothers and responsible and engaged fathers into the academy. A companion paper (Jacobs, 2004) addresses some possibilities in this area. These include some long-term strategies, including faculty unionization and the reduced reliance on part-time faculty. Also suggested are some more immediate possibilities, including limiting the number and sizes of faculty committees, clustering conferences, and putting some limits on the intrusiveness of emails. Many solutions will present themselves that will both reduce working time and enhance efficiency once the unlimited demands of academic life are recognized as a problem that needs to be addressed.

Directions for future research

The NSOPF survey has many virtues, including its large sample size and the fact that time trends can be considered by comparing similar (although not identical) administrations of the survey. However, there are many important limitations. Perhaps the most notable limitation for our purposes is the lack of data on respondents' families. The NSOPF is a study of faculty's work, and, as such, includes few if any work–family items. As a result, basic demographic information about respondents' families, such as the number and ages of children, are lacking. Key details about the spouse's employment situation, such as their occupation, hours worked, and earnings, are also not available. (The NSOPF does include a measure of whether the spouse is also an academic.) Moreover, questions about work–family spillover or stress factors were not included. In short, it lacks questions about work–family conflict that are essential for further inquires in this area.

There are a number of important topics that should be examined in future research in this area:

- What are the implications of time pressures for faculty families? It would be useful to link the data on work demands with work–family outcomes. As we have noted, this is an important limitation in the NSOPF survey.
- What are faculty schedules like during the summer? The glum picture we paint here might be somewhat rosier if many professors kick back for three or four months.
- How long are professors' vacations? How much work do faculty take with them on vacation?
- How have email and the Internet changed the work schedules of faculty? Specifically, do students email at all hours of the day and night? Does email intensify the demands for professional and research time?

- Panel data that follow students from graduate school through tenure, along the line being conducted by Roberta Spalter-Roth (2003) for sociology, would be desirable across a broad spectrum of disciplines.
- International comparisons would be most helpful. Are the time pressures faced by academics in the USA evident in most countries? Do those in their mid-30s in different countries with different promotion systems face the same challenging work–family choices as those experienced by faculty in the USA? International comparisons of faculty experiences would be necessary to answer these important questions.

New data collection efforts are required to address these and related questions. It might be possible to compile university-specific surveys from a variety of institutions if sufficient data comparability could be achieved. It might also be possible to field a supplement to the NSOPF survey that would address some of these issues.

Notes

- 1 The operant definition of ‘faculty’ for the NSOPF includes instructional faculty, non-instructional faculty, and instructional personnel without faculty status.
- 2 The lion’s share of faculty working time is devoted to their main position, with outside consulting representing a minor fraction of total work effort. Both men and women full-time faculty report working about four hours per week doing other work, including unpaid work outside their home institution and compensated extramural activities such as consulting. The balance — 50.5 hours per week for men and 49.2 hour per week for women — is devoted to their principal position. Among full-time faculty, a sizeable minority of men (34.4 per cent) and women (27.0 per cent) do some paid consulting work. The average number of weekly hours consulting is 5.2 for men and 4.7 for women.
- 3 The conclusion regarding increased time on the job during the 1990s may not be right, since 1998 was restricted to faculty whose academic position was their primary job, while the 1992 survey did not allow for such a restriction.
- 4 It should also be noted that delaying childbearing as long as many faculty do increases the ‘sandwich generation’ problem, that is, having young children and elderly parents to care for at the same time.
- 5 NSOPF does not ask directly about children. Thus, the analyses presented here construct parental status through answers to questions about marital status and the number of individuals living with the respondent.
- 6 We sought to determine whether the hours reports from the census were similar to those from the NSOPF data. The average workweek for full-time male post-secondary teachers obtained from the census data was 46.7 hours (43.9 hours per week for females). (Since the census data did not include an indication of whether the position was classified as part-time, we defined full-time for this sample as those working 35 hours per week or more.) This is lower than the NSOPF data partly because it includes those working at two-year as well as four-year institutions. Our census sample is also restricted to married couples. When we broadened our NSOPF sample to approximate the census definitions as closely as possible, the results matched very closely for men and came reasonably

close for women. The 1992 average NSOPF hours for men were 46.7 and 39.1 for women. Another unfortunate limitation is that it is not possible to restrict the census data to assistant professors.

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