TEMPORAL FLEXIBILITY AND CAREERS: THE ROLE OF LARGE-SCALE ORGANIZATIONS FOR PHYSICIANS

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This study investigates how employment in large-scale organizations affects the work lives of practicing physicians. Well-established theory associates larger organizations with bureaucratic constraint, loss of workplace control, and dissatisfaction, but this author finds that large scale is also associated with greater schedule and career flexibility. Ironically, the bureaucratic processes that accompany large-scale organization also allow for a reduction of patient demands on individual physicians, freeing those physicians to pursue other career activities or to fulfill family responsibilities. Large-scale organizations thus appear to represent a trade-off between workplace control and temporal flexibility, and many physicians appear to embrace this trade-off. The data come from surveys and interviews conducted in 2002. Implications extend to other professional and managerial labor markets in which client demands constrain schedules and careers.

It has long been argued that professional workers fare poorly as employees of large bureaucratic organizations because in such settings they lose control of many aspects of their workplace and consequently experience alienation (Blau 1965; Scott 1965; Bailyn 1985; Wallace 1995). Yet among physicians, who represent an archetypal autonomous profession with high levels of individual control, recent surveys show that satisfaction levels in large organizations are comparable to or even exceed those in smaller organizations.[1] This initially puzzling finding can be explained if, as I argue, bureaucracy offers professionals something valuable in exchange for the loss of workplace control: greater flexibility in their schedules and careers. For physicians, the large bureaucratic practice organization ironically offers an expanded range of career options and greater ability to move between those options over time. This kind of flexibility is increasingly demanded in the professional labor force as a result of the rapid influx of women, members of dual-earner families, and others whose preferences diverge from the narrow norm of full-time long-term work (Osterman et al. 2001; Waite and Nielsen 2001). It therefore represents a job attribute that is highly salient in the contemporary professional labor market.

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A data appendix with additional results, and copies of the data and computer programs used to generate these results, are available from the author at Department of Labor Studies & Industrial Relations, Penn State University, 128 Willard Bldg., University Park, PA 16802; Fbriscoe@psu.edu.

[1]Based on the author's analysis of public survey data from the Community Tracking Study (2003); also see Landon, Reschovsky, and Blumenthal (2003).

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This research contributes to a new approach to professional labor markets that emphasizes heterogeneity in career interests and examines the ability of different organizational arrangements to meet those interests. The result of this approach is a partial inversion of a common assumption about large bureaucracies: though they constrain individuals by imposing workplace control, they can also offer liberating schedule and career flexibility. Research that ignores the second half of this equation risks misinterpreting professionals' movement into large organizations. That movement of physicians and other professionals—long observed and much debated (Derber 1982; Brock, Powell, and Hinings 1999)—may not simply result in dispirited practice and professional decline. Instead, large bureaucratic work environments may represent a labor market trade-off that is actively sought by some individuals. In the present paper I examine the drawbacks and offsetting advantages for physicians of working in large organizations. Restricting the analysis to one profession minimizes the need to control for variation in work content. I believe, however, that the findings may extend to other professional occupations where schedule and career flexibility are problematic and a mixture of organizational arrangements persists.

Below, I discuss the ways in which large bureaucratic medical organizations might differ from small private practice settings in terms of physicians' workplace control, temporal flexibility, and career options. The subsequent empirical investigation uses survey data from physicians in a major U.S. metropolitan area. Although the primary empirical focus is on these survey data, the arguments and analyses presented here were also developed through complementary case study research using interviews and archival materials from four large medical practice organizations and a range of smaller private practices.

Medical Practice Organizations and Physician Work

This paper evaluates the proposition that large-scale organizations represent a critical trade-off for physicians when compared to traditional small private practice arrangements: the physician loses control over the workplace, but gains schedule and career flexibility.[2] The first part of this trade-off, linking size to the loss of workplace control, is well established. Size has long been associated with the elaboration of rules and hierarchy, which in turn constrain individual control (Weber 1947; Blau 1965, 1972; Marsden, Cook, and Kalleberg 1996). For physicians, this translates into less control over their physical work environment, staffing and co-worker selection, and determination of organizational policies and procedures (Hafferty and Light 1995; Krelewski et al. 1999; Freidson 2001). I use the term *workplace control* to denote a physician's ability to make decisions about those activities surrounding the core practice of patient care. For the purposes of this study, the change in workplace control with increasing organizational size provides an important backdrop against which new findings concerning temporal and career flexibility will be investigated and interpreted.

Despite an apparent loss of control over their work context, physicians I interviewed in larger organizations expressed enthusiasm for those work settings. A key reason for this favorable attitude was their belief that the larger organizations bring increased flexibility to members of an occupation plagued by problematic schedules and inflexible careers. In what follows, I use the term *temporal flexibility* to refer to these dimensions of schedule and career. In particular, greater temporal flexibility means an enhanced ability to decide when and for how long to engage in the core work activity. Temporal flexibility encompasses both a short timescale involving daily or weekly variation ("schedule flexibility"; see Golden 2001) and a longer timescale involving work patterns that are altered for months or years ("career flexibility"; see Bailyn, Drago, and Kochan 2002; Moen 2003;

[2]In this research, I focus on the medical *practice* organization as opposed to the other common medical organization, the hospital. Traditionally physicians were not actually employees or owners of hospitals, but rather maintained an arms-length relationship with them based on the right to admit patients to the hospital.

also see Barley and Kunda 2004:223–43). For physicians and similar professionals, I argue below that temporal flexibility is a precondition for involvement in a range of career options.

Large-Scale Organizations and Physicians' Temporal Flexibility

Before proceeding, it is instructive to review two prevalent approaches to understanding temporal flexibility. One approach is to conceptualize flexibility as an employee benefit offered by organizational leaders (Goodstein 1994; Glass and Estes 1997; Osterman 1995). Examples include flextime, telecommuting, and paid family leave. Another approach is to view organizational controls, in the form of rules, procedures, and hierarchies, as the key barrier to temporal flexibility; hence where those controls are least elaborated workers should have the most flexibility (Meiksins and Whalley 2002; Arthur and Rousseau 1996). That perspective lies behind the notion that smaller, less bureaucratized organizations should provide high levels of flexibility (Heckscher 1994; MacDermid, Litchfield, and Pitt-Catsouphes 1999).

In many professional occupations, those two approaches to predicting flexibility are limited by substantial structural barriers built into the nature of the work itself. The availability of a formal part-time career policy does little to create actual flexibility for practicing physicians, since they are still beholden to their patients even when off-duty. Likewise, the absence of organizational controls does little to ensure that a practicing physician's time off is truly protected from the demands of patients. This same logic extends to a range of career options. A physician who wants to pursue administrative leadership, research, teaching, or further training, or be involved in family caregiving activities—without abandoning the core professional work of seeing patients—will require the same ability to protect periods of time away from his or her patients. Over the life course, such a physician may seek repeated adjustments in order to accommodate evolving career interests. Neither employee benefits nor freedom from organizational controls will help in the management of such career transitions, because neither one protects time from patients.

An alternative approach starts with the understanding that the central issue limiting both schedule flexibility and access to career options is the relentlessness and unpredictable timing of patient demands. The question of how the larger organization might affect the worker's temporal flexibility problem becomes a question of how that organization would be able to protect the physician from those demands. I propose that a larger medical practice organization can offer better resources to protect the physician from those patient demands in at least three ways. First, it may provide a larger pool of potential substitute physicians to take the place of the individual seeking to shelter time from patients. Second, it may provide tools to enhance the handing-off of patients between the individual seeking to shelter her time and another physician agreeing to cover for her. In particular, the large organization is more likely than smaller organizations to have a systematic patient record system (possibly electronic), which should greatly facilitate those hand-offs (Gans et al. 2005). Third, the larger organization may provide for an easier hand-off transition simply by creating a more standardized work process for all physicians. The thinking here is that rules and procedures that standardize the tasks involved in patient care will also improve the hand-off coordination between the individual seeking to shelter her time and the physician agreeing to cover for her by reducing the scope for costly disagreements and misunderstandings (see Gittel 2003).

Because larger medical organizations have a more elaborated internal division of labor, they actually have reason to direct efforts toward the improvement of hand-off coordination. Common examples of internal division of labor include departments comprised of different medical specialties, and after-hours clinics that treat patients who would otherwise visit the emergency room (Robinson 1999). In order to facilitate efficient and high-quality hand-off of patients between physicians in these different departments, large medical organizations have reason to develop more sophisticated coordination processes—which

should aid physicians seeking to hand off patients for other purposes, including their own temporal flexibility needs. Hence larger organizations may not be improving hand-offs for the purpose of helping physicians, but they may well be having that effect.

On-call schedule. In the small medical practice, the coupling of each patient to one physician generates an inflexible schedule and a career pattern involving continuous physician availability for patients. Physicians in private practice are on-call for most patient emergencies as these arise, day or night. "Cross coverage" arrangements with other private practice physicians help alleviate this burden, but those arrangements are typically limited in scope. In contrast, physicians in larger practice organizations may have reduced on-call schedules because of the greater pool of physicians to share on-call duties, as well as a more sophisticated system for handling the patient hand-offs involved in one physician seeing another physician's patients while on-call. Therefore, as organizational size increases, the call burden can be spread over more individuals, and the number of options for distributing and adjusting call schedules to cover all patients rises. As a result, the average burden on a physician should decline with increasing organizational size.

Hypothesis 1. Physicians in larger practice organizations will have shorter call schedules than physicians in smaller practice organizations.

Part-time flexibility. Scale should also help increase *career* flexibility, since the larger pool of substitutes generates more physician alternatives for covering patients over a longer time period. However, with longer time periods come greater potential complications associated with coordinating the care of patients across two or more physicians; more clinical decisions, and decisions of greater importance, may have to be taken by the substituting physician, leading to potential complications and conflicts. Hence the large organization's proposed capacity to facilitate patient hand-offs should play a central role in enabling physician career flexibility in that organizational setting.

Hypothesis 2. Physicians in larger practice organizations will be more likely than those in smaller practice organizations to report having had a part-time career experience.

Large-Scale Organizations and Composition of the Physician Work Force

If large-scale organizations offer physicians more schedule and career flexibility, then we should expect a degree of labor market sorting in which physicians who value that flexibility disproportionately choose employment in large-scale settings. Which physicians are more likely to value flexibility? Research on work-family role conflict suggests that female professionals and individuals in dual-career families are more likely than others to exhibit such preferences (Moen and Dempster-McClain 1987; Lundgren et al. 2001; Wharton and Blair-Loy 2002). In dual-career families, the partner who assumes the role of primary caregiver is most likely to seek employment in settings permitting career flexibility. Physicians who are also primary caregivers are saddled with responsibilities associated with both their families and their patients. Situations that require flexibility are likely to arise in both spheres, and the greater schedule and career flexibility in the large-scale organization should be particularly attractive to such individuals.

These preferences are likely to be magnified in medicine because of the exceptionally long baseline work hours, averaging 60 per week (AMA 2002), and a work force with rising numbers of women and dual-career professionals. The percentage of women in medicine grew from 8% to 22% from 1970 to 1999 (AMA 2002), and in medical schools it grew from 9% in 1968 to 44% in 1998 (Barzansky, Jonas, and Etzel 1999). The number of physicians marrying other physicians is also increasing (Sobecks et al. 1999). This provides a growing supply of individuals with potentially strong preferences regarding their work schedules.

Comments of interview respondents suggested that large practice organizations were viewed as favorable locations for female physicians and primary caregiver physicians. The director of physician recruitment at one large medical practice organization said, "Physi-

cians who want balance in their lives tend to come to [this organization]. Private practice has physicians who are more interested in money or in the business side of things." In this and other organizations, leaders were starting to recognize that being able to offer flexibility could become an advantage in recruitment of female physicians and dual-earner physicians (see Moody 2002).

Hypothesis 3. The pattern of employment in larger practice organizations will be consistent with observed demographic differences in career flexibility interest.

3a. Compared to smaller practice organizations, larger practice organizations will employ a greater portion of physicians who are female.

3b. Compared to smaller practice organizations, larger practice organizations will employ a greater portion of physicians who are also primary caregivers in dual-career families.

Large-Scale Organizations and the Accommodation of Individual Career Interests

A tacit assumption underlying Hypothesis 3 is that individuals are choosing to work in larger organizations in hopes of attaining more career flexibility, rather than being forced into those organizations and arrangements. If the former is the case, we should expect to find patterns of career behavior *within* the large-scale organization consistent with the accommodation of different individual career preferences. Therefore I also sought to assess the extent to which the greater flexibility of the large-scale organization can be accessed by those who want it. Put another way, are the physicians in the organization who do part-time work the same ones who would have expressed the most interest in doing part-time work? Alternatively, if the organization uses part-time and other flexibility options only for its *own* benefit and not that of employees, it is not actually accommodating individual interests but rather enforcing organizational mandates with no benefit to physicians.

The extent to which large medical practices provide open access to part-time and other career and schedule options can be assessed with survey data by linking physicians' *prior* career preferences with their *subsequent* career activities in the organization. Because physicians are likely to pursue part-time options for family-related reasons, one group among whom to expect an association between preferences and career behavior is individuals who indicated an interest in schedule- or career-related flexibility. At the very least, if the organization was accommodating individual career interests, these individuals should have been subsequently over-represented among those who reported a stint in part-time practice.

Another group of physicians who might be interested in the part-time practice option are those who wish to engage in work-related activities beyond just seeing patients—for example, teaching medical students, conducting clinical research, taking on administrative or leadership roles, or participating in community or governmental programs. In pursuing these activities, most practicing physicians face a set of choices similar to those of physicians who need time for child-rearing: they must either entirely stop seeing patients or find an organizational setting that enables them to keep seeing patients yet protect windows of time from those patients. Therefore, we should find that physicians who expressed an interest in career advancement are more likely to subsequently engage in part-time practice.

Hypothesis 4. Within the large practice organization, prior individual career preferences will predict uptake of the part-time option.

4a. Respondents who reported choosing the organization for hours and schedule reasons should be more likely than others to subsequently take the part-time option for family or personal reasons.

4b. Respondents who reported choosing the organization for career advancement reasons should be more likely than others to subsequently take the part-time option for reasons involving administration, teaching, or research interests.

Methods

Data Collection

My data come from an in-depth study in 2002 of physicians in a major U.S. metro-

politan region, involving two parallel surveys. The first survey was collected from a random sample of primary care physicians in that region, representing an array of different organizational arrangements. The second survey targeted primary care physicians in one of the two largest-size practice organizations in that region, referred to herein as HCO. This organization represents approximately 5–10% of primary care physicians in the region, and targeting it ensured an adequate sample of the large-organization respondents for comparison purposes. Additional detail can be found in Briscoe (2003).

Prior to collecting the surveys, I conducted one-hour key informant interviews with 43 practicing physicians and administrators in HCO and across a range of other organizations in the region, including four other large practice organizations and many smaller private practices. These interviews generated hypotheses that were subsequently tested through surveys, and also provided qualitative evidence on the mechanisms underlying the more general hypotheses.

Questions for both surveys covered schedule and career activities, control at work, and other aspects of the physician's organizational context and personal characteristics. The first survey sample was obtained through the state medical association, and led to a final response rate of 45% (441 usable observations). This rate is comparable to that achieved by other recent physician surveys (Cummings, Savitz, and Konrad 2001). The second sample included all primary-care physicians employed by HCO in 2002, from a list provided by the organization's administration, leading to a final response rate of 62% (147 usable observations). For both surveys, three rounds of paper surveys were sent to home addresses.

The data include physicians from primary care practices who were trained in the specialties of general internal medicine (IM), obstetrics and gynecology (Ob-Gyn), or both. These are two of the most prevalent specialties, and in both of them physicians commonly act as primary-care providers. In order to create a relatively uniform sample, I excluded sub-specialists when they could be identified. In addition, the few physicians practicing in rural regions were excluded, so that the resulting sample included highly comparable physicians from a range of organizational settings in the greater metropolitan statistical area of a major U.S. city.

Longitudinal subsample. In order to test Hypothesis 4, which evaluated the extent to which part-time career uptake reflected the career interests of physicians, I linked a set of HCO survey responses to earlier surveys conducted in 1987 (Konrad et al. 1989). The linked data-file included respondents who remained in HCO during the 15-year interval as well as respondents who had left the organization but subsequently completed surveys about their tenure in HCO (139 usable observations). In all, the 2002 follow-up survey obtained responses from 66% of those who had answered the original 1987 survey (40% of follow-up respondents were female). This combined longitudinal subsample allowed me to predict career actions using antecedent preferences. This is a great improvement on the cross-sectional alternative in which career values are reported simultaneously with behaviors, making them vulnerable to retrospective revision caused by the respondent's urge to reduce cognitive dissonance (Festinger 1957).

Variables

Workplace control. In order to capture workplace control, I created an index averaging responses on three related variables (α= 0.842). Workplace control has long been recognized as a dimension of physician work that is critically vulnerable to bureaucratic intrusion (Freidson 1970).[3] Respondents were asked, "How much control do you have over each of the following? — Workplace issues (e.g., office space, facilities, supplies); Selecting your office staff; Determining organizational policies." For each item, four

[3]This approach focuses more on control of work context than content (see Hackman and Oldham 1975). Physicians' control over work *content* remains relatively high, and challenges to content control come not from practice organizations but from health insurers, governments, and purchasers of health care (Hafferty and Light 1995:141–43).

response categories were offered ranging from "slight or none" (0) to "extensive" (3). The wording of these questions was replicated from an earlier study of physician autonomy in organizations (Konrad 1989).

On-call frequency. The burden of physician night and weekend on-call schedules was measured with the question "About how many weekday evenings are you expected to be on-call each month?" and a similar question about weekend days each month. Responses were open-ended.

Part-time practice. Respondents were asked, "Have you held a part-time position as your main work responsibility for a period of time longer than 6 months (do not include time when you were in training)?" Yes or no responses were required. This was followed by a series of questions about the nature of the part-time position, including the year it began and the total number of weekly hours worked during that part-time career episode. Average hours worked during the part-time practice were 28.4, with a standard deviation of 12.4. Overall, 23% of respondents had worked a part-time schedule at some point.

Organization size and type. I use a continuous organizational size variable, based on responses to a question asking for the total number of physicians in the organization where the physician currently practiced.[4] To normalize the size distribution, I use the logged form of the variable. Two categorical organization-type dummy variables were also included. The first dummy variable, *HCO*, accounts for the large subsample of respondents drawn from HCO, which, at a size of 500 physicians, represented the upper end of the size distribution among practice organizations. The second dummy variable, *HospClinic*, captures respondents who reported working for hospitals, medical schools, and free-standing clinics. That variable was based on the question, "What type of organization is this? (choose one): solo practice, small group (2–9 MDs), large single-specialty group (>10 MDs), large multi-specialty group (>10 MDs), group/staff model HMO, hospital or medical school, free-standing clinic, or other." The continuous size variable ranges from 1 to 2,000, with a mean of 72 and a standard deviation of 9.3. Later investigation showed that the few respondents who reported sizes over 500 appeared to be referencing the overall size of a large hospital system that held an ownership stake in their medical office.[5]

Individual characteristics. A dummy variable is included for *female*. The variables *Age* and Age^2 are entered directly and represent the respondent's age at the time of the survey in 2002. Two main medical specialties were included in the survey. The majority practiced in internal medicine, and a small group practiced obstetrics and gynecology. Therefore the dummy variable *ObGyn* was included in all analyses to control for differences across specialties.

Ownership. In order to control for physicians who were owners, as opposed to employees, respondents' answers to the question "Are you an owner of this organization" were coded (yes or no). This control variable is important because ownership could provide an intrinsic disincentive to pursuing schedule and career flexibility. Ownership and size are inversely related in simple correlations.

Primary caregiver. A primary caregiver variable was developed for the purpose of capturing those physician respondents who should have been most interested in the schedule reduction and career opportunities available in the large organization. The primary caregiver variable was defined by those respondents who (a) had a long-term partner and children and (b) held primary

[4]An alternative specification, using five categorical size variables, produced very similar results.

[5]Precisely comparable estimates for the national size distribution of medical organizations are unavailable. According to Kane (2004), American Medical Association data indicate that in 2001 approximately 18% of practicing physicians were found in "non-institutional" organizational settings of 10 or more physicians. However, 26% of all practicing physicians were found in "institutional" settings, which included HMOs, hospital systems, clinics, and other large organizations. Incorporating all of those physicians provides an upper bound on the total number practicing in larger settings of 44% of all practicing physicians (the 26% in institutional settings plus the 18% in large non-institutional organizations).

Table 1. Means, Standard Deviations, and Correlations of Variables.

Variable	*Mean*	*S.D.*	*HCO Mean*	*HCO S.D.*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*
1 ControlWorkplace	1.375	1.019	1.199	0.783											
2 CallNights	5.904	6.163	3.417	3.795	0.17***										
3 CallWeekends	2.020	1.664	1.396	1.177	0.20***	0.52***									
4 PartTime	0.227	0.419	0.399	0.491	–0.12**	–0.16***	–0.16***								
5 Sex	0.431	0.496	0.519	0.502	–0.14**	–0.04	–0.07	0.38***							
6 Age	44.365	7.647	49.173	8.765	0.21***	0.01	–0.04	0.09*	–0.18***						
7 Age^2	2027.0	708.1	2494.0	889.8	0.19***	0.00	–0.05	0.08	–0.18***	0.99***					
8 ObGyn	0.200	0.401	0.256	0.438	0.10*	0.02	0.06	0.02	0.22***	0.06	0.05				
9 HospClinic	0.197	0.398	n/a	n/a	–0.27***	0.05	0.01	–0.08	–0.03	–0.29***	–0.28***	–0.12**			
10 HCO	0.254	0.436	n/a	n/a	–0.10*	–0.24***	–0.22***	0.24***	0.10*	0.37***	0.39***	0.08	–0.29***		
11 lnOrgSize	4.279	2.228	6.213	n/a	–0.43***	–0.29***	–0.30***	0.18***	0.10*	0.04	0.06	–0.06	0.27***	0.51***	
12 Caregiver[a]	0.217	0.413	0.308	0.464	–0.14**	–0.09	–0.07	0.29***	0.27***	–0.08	–0.08	–0.04	–0.02	0.11*	0.12*

N = 588.

[a]N for caregiver variable is 492.

*Statistically significant at the .05 level; **at the .01 level; ***at the .001 level.

responsibility for family caregiving, defined through a question about the relative career commitment of the respondent versus that of the respondent's spouse or partner. The question read: "Overall, compared with your commitment to family caregiving, would you say his/her commitment to such activities is …" with five response categories ranging from (1) much less to (3) the same to (5) much greater. Respondents with families who answered (1) or (2), indicating that their own commitment was greater than that of the spouse/partner, were coded 1 for *Primary Caregiver*. A second dummy variable, *Equal Caregiver*, was used for respondents with families who indicated the same commitment level as the spouse/partner. The base case therefore represents respondents who reported that their spouses/partners had greater commitment, as well as single respondents.[6] The expectation was that among physicians, those who were also primary caregivers would have the greatest interest in the schedule and career flexibility of the large practice organization, and would therefore be associated with those larger settings.[7]

Reason for part-time practice. For respondents who indicated a part-time practice experience, a series of questions was asked about why they took that route. The possible answers following the question "Why did you take on this position?" included "Work expectations too high in previous position" and "Wanted more family/personal time." Respondents who indicated the latter were classified as having non-work-related reasons. Another option, "Wanted more time to do research or teach," was considered a career-related reason. In addition, many respondents marked "other" and wrote in a reason. These write-ins were classified case-by-case; in particular, several respondents wrote in that they had shifted to part-time practice in order to accommodate new managerial responsibilities. Of 139 longitudinal respondents, 23% were classified as part-time for non-work reasons, 14% for work-related reasons (among whom total work hours would have been longer in order to accommodate their non-clinical work activities), and the remaining 63% reported no part-time experience.

Career preferences. For a subset of physicians within HCO, the 1987 survey (discussed above) provided data on the reasons they had cited years before for coming to the organization. Questions from that survey were taken from a section with the following heading: "Below are listed some reasons reported by physicians for deciding to work in various practice settings. How important were each of these reasons in your decision to join this organization?" Of the several reasons that followed, two were used as indicators of career preferences that should increase interest in the part-time practice option: "I wanted predictable working hours" and "I believed this organization would offer me opportunities for career advancement." Response categories ranged from (0) not at all important to (3) very important. The two preference variables used are somewhat correlated (–0.21, $p = 0.02$).

Analytic Approach

For Hypothesis 1, an OLS model was used to examine the links between organizational size and schedule flexibility. In order to account partially for the correlated errors arising because a subsample was drawn from one organization, I used Huber-White robust standard errors. For Hypothesis 2, a logistic model was used to examine the link between size and career flexibility by predicting the binary variable of whether the respondent reported a part-time experience.[8] For Hy-

[6]The few single parents in the sample were assumed to lack the extra income needed to pursue part-time practice.

[7]Relative share of household income was also investigated for the purpose of identifying primary caregiver respondents. Results using household income share were very similar. However, the income measure suffered from strong endogeneity, because respondents who practiced in larger organizations would have had lower incomes from those practice positions simply by dint of lower average pay in those settings—thereby inflating their spouses' reported household income shares, and artificially associating household income share with organizational size.

[8]Because of the possibility of heteroskedasticity in these data, I replicated these models using a generalized model with error clustering based on organization

Table 2. Impact of Organizational Size on Workplace Control, Schedule, and Career. (OLS and Logistic Models)

	Control of Workplace		*Nightly On-Call Frequency*		*Weekend On-Call Frequency*		*Part-Time Practice*	
Variable	*(1)*	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*	*(8)*
Intercept	0.604	0.768	4.501	4.730	2.091	2.117	–6.390**	–6.257**
	(0.761)	(0.750)	(4.681)	(4.668)	(1.359)	(1.371)	(2.187)	(2.189)
Female	–0.209**	–0.190*	–0.191	–0.131	–0.138	–0.123	2.183***	2.156***
	(0.078)	(0.076)	(0.543)	(0.545)	(0.137)	(0.137)	(0.255)	(0.256)
Age	0.053	0.028	0.156	0.102	0.038	0.022	0.102	0.116
	(0.031)	(0.031)	(0.184)	(0.187)	(0.056)	(0.057)	(0.088)	(0.089)
Age^2	0.000	0.000	–0.001	–0.001	0.000	0.000	–0.001	–0.001
	(0.000)	(0.000)	(0.002)	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)
ObGyn	0.197*	0.178*	0.498	0.417	0.250	0.243	–0.430	–0.403
	(0.084)	(0.084)	(0.582)	(0.582)	(0.161)	(0.161)	(0.280)	(0.282)
HospClinic	–0.258*	–0.112	2.351*	2.762**	0.297	0.414	–0.497	–0.599
	(0.113)	(0.113)	(0.927)	(0.938)	(0.224)	(0.229)	(0.353)	(0.359)
HCO	0.078	0.222	–1.055	–0.656	–0.181	–0.075	0.358	0.279
	(0.121)	(0.122)	(0.801)	(0.812)	(0.197)	(0.204)	(0.341)	(0.350)
lnOrgSize	–0.188***	–0.133***	–0.832***	–0.704**	–0.220***	–0.177***	0.165**	0.160*
	(0.022)	(0.026)	(0.202)	(0.216)	(0.048)	(0.049)	(0.063)	(0.072)
Owner		0.548***		1.479*		0.425*		–0.562
		(0.120)		(0.734)		(0.166)		(0.354)
Adj. R^2 / -2LL	0.256	0.285	0.103	0.109	0.100	0.103	518.5	514.1

N = 588.

Notes: Models 1–6 report OLS regression results with Huber-White robust standard errors. Models 7 and 8 report logistic regression results.

*Statistically significant at the .05 level; **at the 0.01 level; ***at the 0.001 level.

pothesis 3, testing the link between individual characteristics and organizational size, an OLS model with the dependent variable of logged size was used, also with robust standard errors. Finally, for Hypothesis 4, I constructed unordered logit models of an individual's part-time experience (three categories) predicted using his or her career preferences reported at an earlier point in time.

Results

Table 1 provides basic means, standard deviations, and inter-correlations of variables used in the analyses, and Tables 2–4 report results.

Workplace control. Model 1 in Table 2 confirms that, as expected from earlier literature, organizational size is inversely related to workplace control. A one-standard-deviation increase in log size, which, centered at the mean size, would correspond to an increase of 200 physicians, translates into just under a one-standard-deviation decrease in control (0.933 points on the 4-point control scale). As another marker for comparison, the size difference between a solo practitioner and an HCO employee translates into a 1.168 point decrease in control. Model 2 indicates that this relationship holds in the presence of an additional control for respondents who were owners. As expected, ownership was itself associated with a statistically significant increase in workplace control. Three control variables were also statistically significant in these models: women reported less workplace control than their male counterparts, Ob-Gyn

(Proc Genmod in SAS). The results were similar, and the size variable retained its statistical significance across all models.

specialists reported more control than others, and hospital-affiliated physicians reported less control than others (although this effect was no longer statistically significant once the ownership control was added).

On-call frequency. The first hypothesis predicted that larger organizations would be associated with a lower on-call burden. Models 3–6 in Table 2 report the impact of organizational type on the frequency of on-call schedules for physicians, and the findings are confirmatory. A standard-deviation increase in log size translated into an average of 1.85 fewer nights per month on call (Model 3) and 0.49 fewer weekend days per month on call (Model 5). The size difference between a solo practice and an HCO respondent corresponded to fully 5.2 fewer nights and 1.36 fewer weekend days on call per month. This decreasing call pattern also remained statistically significant in the presence of the ownership control, shown in Models 4 and 6. Ownership itself was significantly associated with an increase in on-call frequency. The one other control variable that was statistically significant in these models showed that hospital-affiliated physicians were on call more nights than others.

Part-time practice. The second hypothesis predicted that respondents from larger organizations would be more likely to report part-time practice experience. Models 7 and 8 in Table 2 show the impact of organizational type on the likelihood of part-time practice. Consistent with Hypothesis 3, physicians from larger organizations were more likely to have reported a part-time practice experience. A standard-deviation increase in log size translated into a 44% increase in the odds of part-time activity. The size difference between a solo practice and an HCO respondent corresponded to a 278% increase in the odds of part-time activity, indicating that part-time activity was nearly three times more likely in the larger setting. As with the earlier hypotheses, the general size trend for part-time practice also remained intact after a control was included for ownership. Ownership itself was not a statistically significant predictor of part-time behavior. The one control that was statistically significant showed female physicians to be about eight times more likely than their male counterparts to report part-time activity.

Table 3. Impact on Likelihood of Practicing in a Larger Organization. (OLS models; dependent variable is logged organizational size)

Variable	*Full Sample (1)*	*Women Only (2)*
Intercept	10.980***	7.290*
	(1.894)	(3.746)
Female	0.424*	
	(0.178)	
Age	–0.324***	–0.211
	(0.080)	(0.165)
Age²	0.004***	0.003
	(0.001)	(0.002)
ObGyn	–0.289	–0.519
	(0.264)	(0.354)
PrimaryCaregiver	0.470*	1.150**
	(0.236)	(0.390)
EqualCaregiver	–0.077	0.437
	(0.242)	(0.397)
Adj. R^2	0.039	0.074
n	588	257

Notes: Models report OLS regression results with Huber-White robust standard errors.

*Statistically significant at the .05 level; **at the 0.01 level; ***at the 0.001 level.

Large-scale organizations and the composition of the physician work force. The third hypothesis proposed that women and primary-caregiver physicians would be over-represented in larger organizations. The results from Model 1 of Table 3 indicate that female physicians worked, on average, in larger practice organizations. The effect of *Female* increased logged size by 0.424, which translates into a difference between a 58-physician practice and an 89-physician practice at the mean size level. Model 1 also indicates that physicians who were primary caregivers practiced in larger organizations, with an increased logged size of 0.470 or the difference between a 57-physician practice and a 91-physician practice. The magnitude of this latter effect increases greatly when the analysis examines women only, as shown in Model 2. Among women, primary caregivers were associated with a 1.150 increase in logged size, or the

difference between a 41-physician practice and a 128-physician practice. The *equal caregiver* variable was not statistically significant in either regression.

Temporal flexibility and the accommodation of individual preferences. The fourth hypothesis concerned whether the pattern of part-time practice within the large practice organization, HCO, reflected the preferences of individual workers. If it did, that would provide support for the idea that the organization was accommodating worker interests; if it did not, that would suggest that organization fiat or some other non-discretionary process may have been determining who practiced part-time. Table 4 reports on a regression predicting the part-time status of physicians using their responses to temporally prior career preference questions about why they came to the organization. The two columns of Model 1 report coefficients for the two different part-time status categories: those who practiced part-time for workload, family, or personal reasons (first column) and those who practiced part-time to manage, teach, or do research (second column). The two columns of Model 2 report results for the same part-time status categories when the additional control *Female* is added.

As expected, Model 1 indicates that physicians who came for predictable hours were more likely to report going part-time for workload, family, or personal reasons. A standard deviation increase in *PredictableHours* translated into a 68% increase in the odds of part-time activity. Physicians who came for career advancement were more likely to report going part-time in order to manage, teach, or do research. A standard deviation increase in *CareerAdvancement* translated into a 59% increase in the odds of part-time activity. *CareerAdvancement* was also significantly associated with a reduced likelihood of part-time work for family-related reasons. When the female control is included in the same regressions, shown in Model 2, the significance levels for the career-preference variables predicting part-time for family reasons are decreased. In particular, the significance of the *PredictableHours* variable drops to just below the 5% level (t-value of 1.91). This is unsurprising given that *Female* and *PredictableHours* are themselves strongly correlated.

Discussion

In this research, I found that larger medical practice organizations provided physicians with greater schedule and career flexibility. Even while larger organizations diminished workplace control, they offered a reduced on-call schedule, with five fewer nights and one less weekend day on-call per month. The likelihood of part-time practice also rose greatly with size: respondents from larger organizations were nearly three times more likely to report a part-time experience than were their colleagues in solo practice. Turning to the work force composition, the distribution of women and primary-caregiver physicians was skewed in the direction anticipated: both groups rose in number with organization size. Finally, the higher frequency of part-time practice in the larger organization appeared to reflect an accommodation of individual interests as opposed to an organizational mandate, based on the correspondence between prior preferences and subsequent uptake.

This trade-off between workplace control and temporal flexibility appears to be recognized by many physicians in the labor market, and reflected in turn through their organizational employment choices. Consider the following interview comments:

> Although it was difficult to relinquish control of the day-to-day details of my practice, I've really appreciated the clinical support here and I love working two-thirds time. I feel like I'm truly able to enjoy both my work and my family.

> When I started [practicing medicine] in the early 80s, this place was not viewed in the community as the most desirable place to work.... But it was accepted that you worked in this kind of practice because others would cover for you, and you did not have to work 24/7.

The two sides of this trade-off—the loss of workplace control and the gain of temporal flexibility—appear to be intertwined in origin: both are rooted in elaborated bureaucratic processes of the large-scale organization that help physicians achieve safe patient hand-offs. These processes can enhance a physician's

Table 4. Predicting Part-Time Status in HCO (1988–2002) Using Selected Prior Reasons for Joining the Organization (1987). (unordered logit models)

	(1)		(2)	
Variable	*Part-Time for Workload, Family, or Personal Reason*	*Part-Time to Manage, Teach, or Do Research*	*Part-Time for Workload, Family, or Personal Reason*	*Part-Time to Manage, Teach, or Do Research*
Intercept	7.237	19.080	8.595	19.508
	(10.031)	(16.677)	(10.908)	(16.846)
Female			2.069***	0.679
			(0.557)	(1.021)
Age	–0.227	–0.702	–0.325	–0.730
	(0.338)	(0.541)	(0.368)	(0.550)
Age^2	0.002	0.006	0.003	0.006
	(0.003)	(0.004)	(0.003)	(0.004)
ObGyn	–0.518	–0.429	–0.588	–0.487
	(0.604)	(1.400)	(0.684)	(1.391)
PredictableHours	0.519**	–0.678	0.305	–0.738
	(0.222)	(0.420)	(0.160)	(0.429)
CareerAdvancement	–0.663**	0.461*	–0.497	0.454*
	(0.249)	(0.201)	(.272)	(0.192)
Likelihood Ratio	268.5		269.4	

N = 139.
Note: Base case for 3-category dependent variable is no part-time experience.
*Statistically significant at the .05 level; **at the 0.01 level; ***at the 0.001 level.

temporal flexibility and career options, but may also contribute to a much-noted loss of control and feeling of alienation (Briscoe 2004). From this perspective, the gain of temporal flexibility can be viewed as an unintended consequence. The improvement of hand-offs in the large-scale medical practice organization, and the very existence of the large-scale organization itself, are motivated by goals involving medical efficiency and quality (Robinson 1999), not accommodation of physician career interests.[9]

The potential for trade-offs linked to organizational size and bureaucratic intensity was proposed early on by Engel (1970), who found that physicians in an otherwise heavily bureaucratic setting enjoyed high levels of freedom in their research activities, and that this particular type of freedom more than compensated for the loss of control over their patient care practice. Reflecting on this finding, she suggested that bureaucracies may be better able than smaller organizations to supply particular freedoms or resources that some professionals value in their work. Consistent with that thesis, my findings show that the large-scale organization provides physicians with rare access to valuable temporal flexibility. Further, some professional workers prefer and seek out that flexibility, while others prefer and seek out jobs with more traditional characteristics.

Further evidence that this trade-off involved in large-scale bureaucratic employment is experienced positively by many physicians comes from an examination of career satisfaction. If individuals working in the large-scale organization were primarily experiencing it negatively because of the alienating loss of autonomy, we would expect them to have lower satisfaction levels

[9]A historical review of annual reports from HCO uncovered no discussions of physician schedule or career flexibility. An interview with one of the founders confirmed that physician flexibility was something they had come to realize they offered, and not part of the initial motivation for creating the organization.

than individuals in smaller organizations. If instead, however, those individuals in the large organization valued the off-setting flexibility available there, then we would not expect marked differences in satisfaction. In controlled regressions (available from the author), no statistically significant differences in career satisfaction were found across the different organizational types using a range of different model specifications.

The flexibility identified here in large medical practice organizations may be particularly valuable because it accommodates a range of work and non-work career activities beyond direct patient care. This meta-flexibility encompasses *both* professionally stereotyped low-status activities like parenting *and* professionally stereotyped high-status activities like research and teaching. As a result, this form of organizational flexibility may blur the normative distinctions typically made between full-timers and part-timers, and between flexibility seekers and those exhibiting more traditional career patterns. Might this contribute to the erosion of traditional "ideal worker" norms that treat an individual's full-time professional practice status as an indicator of commitment and ability (Williams 1999)? Further research should ask whether individuals who avail themselves of career flexibility in these organizations are less stigmatized than they would be for pursuing the same ends in other settings.

Finally, the question of whether large-scale medical practice organizations adversely affect patient health care quality is an important issue not addressed directly in this research. However, the large organizations I studied showed no public evidence of lesser quality, and HCO had received many quality-based awards.[10] Within HCO, an unpublished study concluded that part-time physicians compared favorably to full-time colleagues, spending more time with each patient on average, receiving higher patient satisfaction scores, and not differing significantly on measured health outcomes.

Toward a Generalizable Model

Beyond medicine, workers in many other professional occupations show signs of strong interest in temporal flexibility and career options (Leicht and Fennell 2001; Jacobs and Gerson 1998; Epstein et al. 1999). Some of those occupations may also share characteristics that lead organizational size to be associated with temporal and career flexibility. However, some limiting features of my findings must be taken into account in advancing a more generalized model of professional organizations and temporal flexibility.

The logic articulated here assumes that client demands generate a flexibility problem that organizations may in turn help solve. Many other professional service occupations involve demanding clients, but two scope conditions pertain. First, the more those demands are temporally unpredictable and urgent, the more of a potential problem they create for workers seeking flexibility. However, if the work is simple enough to be handed off between workers, then the flexibility problem can be solved easily through simple worker substitution. If, instead, the work is complicated in a way that creates sequential dependence between service production events, there is a real barrier to substitution through client hand-offs (Crowston 1997).[11] This forms the second scope condition giving rise to the flexibility problem.

Given those conditions, organizational processes that achieve more efficient and effective hand-offs should also offer workers the chance to have more temporal flexibility and career options. Yet another set of considerations may also shape the extent to which organizations that successfully enable hand-offs also allow those hand-offs to be used by

[10]HCO had received awards or special recognition from the National Committee for Quality Assurance, the Henry J. Kaiser Foundation, Medicare, and the National Center for Health Services Research, and had received top ratings from *Newsweek* and *U.S. News & World Report*.

[11]If producing services at time *B* depends on knowledge from the services provided at time *A*, then it will be more difficult for services at time *B* to be provided by anyone other than the same person involved at time *A*.

workers for their own flexibility needs. One key scope condition on that linkage is the labor market power workers must possess in order to ensure that organizational hand-off capabilities are made available for their own purposes. Such labor market power is likely to vary across and within occupations, and in some cases may even vary between small and large organizations (for example, the prestigious and lucrative work done by large law firms, relative to smaller ones, drives up competition for employment in the larger firms, possibly muting lawyers' attempts to capitalize on any potential for greater flexibility in those firms). Finally, in professional occupations such as engineering and law, institutionalized norms against personal flexibility may inhibit both organizational offerings and individual uptake (Perlow 1998; Epstein et al. 1999). Hence in future research, it may be more important to focus on the bureaucratic processes that enable hand-offs rather than the size of the organization *per se*.

Conclusion

The field of work and employment research needs to better understand changes occurring in professional labor markets. One of the key trends in these labor markets is the expanding ranks of women and dual-career family members. Therefore, a central question for understanding professional labor markets continues to be, "Where and how will career flexibility be found?" The current research suggests that organizational type and size provide an important and intriguing part of the answer. Larger bureaucratic medical practice organizations provide physicians with greater schedule and career flexibility, even while continuing to crimp traditional workplace control. In a broader range of professional occupations, the roles of scale and bureaucratic process deserve closer examination in the provision of temporal flexibility. Size is relevant for flexibility not just because it increases the likelihood of flexible employee benefits (Knoke 1995; Osterman 1995), but because of its effects on work-organization factors such as resources to enable hand-offs. Unpacking those relationships between scale and bureaucracy, work-organization, and temporal flexibility will likely require further research that is multi-method and sensitive to industry context.

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