

**Gendered Ambition:
Men's and Women's Career Advancement in Public Administration**

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Abstract

We explore the relationships between gender, career ambition, and the emergence of executive leadership. Growing research in public administration shows that career systems shape bureaucrats' ambitions, political behavior, and management. Yet career systems are not neutral conduits of talent: administrators are more likely to pursue advancement when career systems favor them. This study proposes that women and men respond to gendered public career systems. Using national and state-level data on public school managers in the United States, we find gender disparities in the career paths that lead educators from the classroom to the superintendent's suite. Specifically, we find that female and elementary school teachers advance more slowly than male and secondary school teachers. We also find gender disparities in certification and experience among principals. Accordingly, female and elementary principals report lower levels of ambition. Such gendered career systems may lead to biases in policy agendas and management styles.

This paper proposes a theory of gendered bureaucratic ambition, in which public administration career systems lead women and men to advance to management and executive ranks by different paths. Accordingly, male and female administrators who select into the same field tend to enter with and develop different degrees of career ambition, with attendant results for policy and management in public bureaucracies.

In *Bureaucratic Ambition*, Teodoro (2011) argues that public administration career systems—that is, the institutions and behavior patterns that define recruitment, selection, and promotion—make different kinds of individuals more or less likely to emerge as leaders of public organizations. Systemic biases in career systems thus lead to variation in innovation, management, and political behavior among public executives. One well-established bias in public administration career systems not addressed in Teodoro’s work relates to gender, where recruitment, development, and promotional practices tend to favor men over women in many fields of public administration (Naff 1994; Daley 1996; Connell 2006, among others).

Connecting theories of bureaucratic ambition to research on gender and career advancement, we argue that public employees are aware of the gender biases that typify the career systems in which they work. With this knowledge, men and women of varying ambition select into different career paths, with ambitious administrators seeking opportunities to burnish their credentials in ways that are likely to foster advancement, given their genders. One consequence of these patterns is that male and female managers are likely to take very different paths to their jobs; another consequence is that male and female managers are likely to hold markedly different degrees of ambition for advancement to executive posts. Ultimately, gendered career systems are likely to lead to gendered public management, with attendant effects on politics, policy, and public administration.

We begin with a discussion of how bureaucratic ambition shapes managerial behavior. We then turn to public education specifically, tracing the gendered history of educational leadership and its evolution from predominantly female to predominantly male. Building on this history, we advance hypotheses regarding the differences between elementary and secondary principal posts and how these differences shape bureaucratic ambition in markedly gendered ways. We argue that a gendered public education career system causes female and male educators to follow different paths into administration, and that these differences may cause gender disparities in ambition for executive jobs. We test these hypotheses with two datasets: the 2011-2012 national Schools and Staffing Survey and the 2012-2014 Texas Middle Managers Survey. Analyses of both datasets demonstrate systematic, mutually-reinforcing gender differences in career paths and ambition among public school managers. We conclude with a discussion of the policy implications of our results and suggestions for future research.

Bureaucratic ambition and gendered career systems

The effects of ambition and systems of career advancement on public officials are the subjects of considerable research. In this study, we follow Teodoro (2011) in defining *ambition* narrowly as “a desire for career advancement to higher-status positions” (72). This definition excludes “ambition” as a generic desire for some goal (e.g., “Every man is said to have his peculiar ambition”¹) or Machiavellian malevolence (e.g., “Virtue is choked with foul ambition”²). A central theme of Teodoro’s theory of bureaucratic ambition is that public administrators’ political, managerial, and career decisions are inseparable from the labor markets in which they work. The institutions that define professions and job opportunities can foster or frustrate advancement by different kinds of bureaucrats. Aware of the preferences and biases of

¹ Abraham Lincoln’s first campaign statement, to the People of Sangamo County, 9 March 1832.

² *Henry IV, Part 2, Act III, Scene 1.*

the professions in which they operate, administrators and politicians alike set their expectations and behaviors accordingly.

Ambition and public management

Organizational theorists since Downs (1967) have observed that most administrators have mixed motives, including both individual goals like promotion and job security, and public service goals like improved organizational performance. Downs posits that only *zealots* with single-minded devotion to a particular policy and *statesmen* dedicated to serving society as a whole readily embrace policies that risk their job security and promotion prospects. Such officials are rare. *Conservers* (who seek to maximize their own security and convenience) avoid innovations since they require effort and risk. *Climbers*, who seek only their own self-advancement, seek innovation if likely to help their careers. Generally, analysts must consider such individual incentives in understanding the likelihood of public sector innovation.

Following suit, a growing literature explores the implications of bureaucratic ambition and job mobility for public management and policy. A handful of recent studies link administrators' job mobility to policy decisions (Teodoro 2009; LeRoux and Pandey 2011; Villadsen 2012; Adolph 2013; Zhu and Zhang 2015). Maranto and Wolf (2013) develop case studies of New York Police Commissioner William Bratton and Washington, DC School Superintendent Michelle Rhee, to argue that innovations that improve public service are unlikely to spread unless they are advantageous to top administrators' careers. Regarding public education, several studies have linked career ambition and executive mobility to management behavior and/or organizational performance (Hill 2005; Boyne and Meier 2009; Hamidullah, Wilkins and Meier 2009; Teodoro 2013; Carroll 2017). This line of research is particularly promising because it links management behaviors and organizational outcomes to the

microfoundational logic of individual administrators and agencies.

Gendered career systems

To date, research on bureaucratic ambition and gender in public administration have developed separately. In developing his theory of bureaucratic ambition, Teodoro (2011) observed that gender could condition bureaucratic ambition and career advancement. “Career concerns might affect administrators’ political choices if a career opportunity structure is systematically biased in favor of or against a particular gender...” argued Teodoro. “Individuals’ perceptions of bias in a profession can affect their behavior, whether or not a systematic bias exists” (99).” Despite this recognition, Teodoro (2011) fails to trace out the logic of gender in career systems and leaves aside gender as a factor in his empirical analyses. Similarly, Gailmard and Patty’s (2007) “slackers and zealots” model of administrators’ investment in human capital assumes that career returns to such investments are uniform for bureaucrats of all genders.

Research on women in public administration gives ample reason to expect that gender conditions bureaucratic ambition in important ways. Historically, women have been excluded or marginalized in public administration theory (Stivers 1991; Bearfield 2009). Stivers (2002) argues that gender relates to various administrative characteristics, as women bring different experiences and perspectives to their jobs. Meier, Mastracci, and Wilson (2006) describe these experiences in their research on “emotional labor,” implying that women bring unrecognized skills to their organizations. For instance, in a survey of public managers, women scored higher on scales of compassion and attraction to policy-making (Dehart-Davis et al 2006). These skills can result in more effective client interactions (Fox and Schuhumann 1999), increased agency performance (Meier et al 2006), and different patterns of managerial interactions (Dolan 2000). Women in public executive posts are increasing in number, but typically have more educational

and organizational experience than their male counterparts (Bowling et al 2006).

A corresponding gender gap in ambition exists among public elected officials. Several studies have noted that women were less likely than men to pursue elected office (Fulton et al 2006, Bledsoe and Herring 1990, Fox and Lawless 2014). Scholars attribute this depression in women's ambition the fact that often they are less likely than men to be encouraged to pursue prominent positions (Fox and Lawless 2004). Likewise, women seek upward political mobility when their chances of success in gaining a particular position are relatively greater; in short they exhibit less risk acceptance (Fulton et al 2006, Beldsoe and Herring 1990). Relatedly, scholars find that women exhibit lower levels of ambition since they see themselves as less qualified and capable than men of comparable ability and experience (Fox and Lawless 2004, 2014, 2011). Women in positions with potential to advance in their organization are often older and/or work outside of the professional networks that facilitate advancement (Maestas et al 2006, Connel 2006). Women with higher levels of political ambition decide to pursue higher office strategically, incorporating the likelihood of gaining the position, the value of the position, and its costs (Palmer and Simon 2003). The implicit expectation is that women must achieve higher qualifications than men in order to attain elected offices, and so may exhibit less ambition than similarly-qualified men.

Gender differences in division of labor exist in public employment, too. Women may remain underrepresented in management and unencouraged to pursue such positions because their behaviors are potentially undervalued. For instance, research on the differences between male and female public managers indicate that women more strongly value delayed gratification (Stackman et al 2005) and score higher on compassion indexes (Dehart-Davis et al 2006). In the private sector, differences are noted in leadership styles as women are more likely to use a

transformational leadership approach (Burke and Collins 2001).

Educational administration as gendered career system

The history of educational professions in America is to a considerable degree a history of shifting gender roles. In the 19th and early 20th centuries many educational administrators were women, in part reflecting stereotypes that women better fit childcare roles, but also due to labor markets: women's labor cost far less than men's. Through the mid-20th century, administrative progressives "professionalized" educational leadership. Small schools and districts consolidated and graduate education was increasingly a requirement for principal and superintendent posts. Part of this professionalization was redefining educational *leadership* as fundamentally male, and the number of female school superintendents declined through the mid 20th century (Rousmaniere 2013). The percentage of elementary school principal posts held by women fell from 55 percent in 1928 to 20 percent in 1973. At that point the percentage of high school principal posts held by women, which had never been high, fell to 1 percent. Rousmaniere observes that by the 1960s "[i]n schools, it seemed to be the natural order of things that women taught and men managed" (2013, 102). Indeed, going back to the mid-19th century, as schools grew larger, school boards and American elites generally saw women as lacking the temperament to manage other women, much less men; instead they assumed male leadership could make (mainly) female teachers more efficient and effective. In the postwar period educational administration, particularly at the secondary level, was made male in part through the GI Bill, which enabled (overwhelmingly male) veterans to gain the credentials to enter administration. Perhaps more important over the long term was the development of alternative career paths to attract men to the teaching profession by enabling them to ascend to administrative roles rapidly, particularly through athletic coaching. As Rousmaniere writes:

“The work of athletic coaching—communication, authority, disciplinary training of students, and public relations—aligned with the emerging professional identity of the new principal and, in a happy coincidence, provided the masculine image that appealed to both the public and to school reformers. An aspiring male principal who had a background in athletic coaching was automatically identified with a physicality that excluded women...The message was that school principals were not only responsible for bureaucratic paper-pushing but also for such physical work as supervising fire drills, breaking up playground fights, disciplining adolescent boys, and providing a virile and stabilizing presence in the school” (101).

A 1971 study found that nearly 80 percent of school superintendents had coached athletic teams earlier in their careers. Similar surveys in the 1990s indicated that a fifth of elementary principals and half of secondary principals had coached (Rousmaniere 2013). This finding was confirmed in fieldwork in the 1980s (Edson 1988) and 1990s (Hill and Ragland 1995), which indicated that, despite the passage of Title IX in 1972, coaching *male* athletic teams was a relatively quick pathway to principal; coaching female teams was not.³ Football in particular receives considerable attention and requires substantial organizational and political skills. Greene (2012) offers empirical evidence that high school football provides school and community level social capital, which in turn improves academic success.

Historically, school boards typically terminated female (though not male) teachers or administrators once they married, and nearly always once they expected children (Rousmaniere 2013; Urban 1982). While such practices are long gone, vestiges remain in the widely held view among superintendents and school boards that men treat education as a career, requiring upward mobility into administration to support their families, but women—particularly at the elementary levels—teach for a few years until they marry and have children, after which they may or may not return to education (Sedlak & Schlossman, 1986; Strober & Lanford, 1986). Of course, this is likely true for some women; female administrators may bear double burdens due to common

³ This finding accords with the observations of one coauthor, who serves on a school board.

expectations that they should shoulder most of the work of child-raising. Even in progressive institutions like universities, women may choose or be pushed into roles less apt to result in eventual promotion to peak posts (Rothman, Kelly-Woessner and Woessner 2011; Connelly and Ghodsee 2011). Within public schools, female administrators typically gain promotion more slowly and face particular challenges in relationships with elected school board members (McGee Banks 2007; Polka and Litchka 2008). Accordingly, fieldwork suggests that male administrators do not view women's career paths as equal to those of men (Edson 1988; Hill and Ragland 1995). As one female assistant principal interviewed by Edson (125) put it: "I think people wonder about a female administrator. Is she a woman, or is she a woman who wants to be a man? Why would she want this job? I am a woman, and I don't try to be a man. I would have had a problem, though, if I had been profoundly ugly or dramatically beautiful. But luckily, I am just an ordinary person."

Reinforcing gender distinctions are the structural differences between elementary and secondary schools. Relationships and trust between schools and families are more easily fostered in elementary schools (Adams and Christenson 2000; Bryk and Schneider 2002). On the classroom level an elementary teacher typically interacts with perhaps one-fifth as many students as a secondary teacher. Elementary schools typically cover five or more grades while secondary schools typically cover four or fewer, meaning that the latter have far greater annual student turnover through graduation, with additional turnover from teens dropping out of school. Further, elementary schools are typically smaller than secondary schools (Snyder and Dillow 2015). Generally, elementary teachers are thought to show more dedication to their children (maternal roles); secondary teachers to their fields (expert roles) (Sargent 2001). Together these factors mean that elementary school principals can and often do know each student on sight. Such

intimacy is unusual in secondary schools, and secondary educators often belittle the relationship building of elementary educators as *maternal*. The relative impersonality of large secondary schools has made them targets of school reformers (Sizer 1996; Ouchi 2009), and increased demand for charter schools and other alternatives (Maranto, Milliman, Hess and Gresham 2001).

Yet in the view of administrative progressives who have dominated schools of education since the early 20th century, serving as principal of a large secondary school offers better preparation for a superintendent post than an elementary school could provide. The larger size, larger physical plants, athletic teams, and larger and more differentiated staffs of high schools are seen as providing more and more challenging budgeting and management experience – work more akin to that of a superintendent. Ironically, isolation from the classroom is often seen as positive for aspiring educational executives, enabling leaders to see the “big picture” of the school district rather than the micro perspective of individual teachers, parents, and children. High school principals also have greater visibility, with opportunity to network with school board members and community leaders generally (Rousmaniere, 2013; Callahan, 1962; Brouillette 1996). Traditionally these have not been women’s roles.

Edson (1988) and Hill and Ragland (1995) report that female teachers interested in promotion are often pressured to go into elementary rather than secondary administration. The latter suggests that such sexism is slowly fading, but in our national data (discussed below), 63.8 percent of elementary school principals are women, compared to 48.4 percent of secondary school principals. In contrast, women make up 89.2 percent of elementary teachers and 62.9 percent of secondary teachers. In many cases, women who become superintendents were asked to take leadership roles to help their schools, rather than seeking such roles. This pattern suggests that female school leaders, particularly in elementary schools, focus more on serving students

and less on personal advancement (McGee Banks 2007; Polka and Litchka 2008).

Does gender matter for public management?

Gendered leadership in the public sector can be important in various ways. Given their traditional positions as outsiders, one might expect female administrators to embrace more idealism, prioritizing equity, for example (Stivers 2004). To use Downs' (1967) terms, we might expect relatively more women to act as *zealots* or *statesmen* (stateswomen?) rather than as strictly self-interested officials (though for a more nuanced view, see Perry 1997).

Because women bring different perspectives, qualities, and acquired skills to the bureaucracy, female executives demonstrate different behaviors in their managerial interactions (Meier, O'Toole and Goerdel 2006), strategies (Johansen 2007), and spending outputs (Dolan 2002). Regarding management generally, past research finds women somewhat more likely to embrace collaborative and equity focused leadership styles, and indeed to be perceived in that way by their superiors and subordinates (Crampton and Mishra 1999; Hill and Ragland 1995; McGee Banks 2007; Pearce 2012; Stivers 2004; Kanter 1977). Much of this empirical research has been conducted in American education administration, and as noted above, these patterns may be particularly true for women in elementary schooling.

To summarize, existing research indicates that career ambition significantly shapes bureaucratic behavior, and that public administration careers generally and education posts in particular may have gendered dimensions. With these elements in mind, we trace the implications of a gendered public administration career system for bureaucratic ambition.

A theory of gendered bureaucratic ambition

Here we propose a theory of gendered bureaucratic ambition, in which public administration career systems lead women and men to advance by different paths and develop

different degrees of career ambition, with attendant results for policy and management in public agencies. We proceed from a rational choice perspective. That is, we do not argue that men and women are intrinsically and categorically different as professionals, or that they think differently about advancement in terms of personality or cognition. Rather, we argue that the government agencies that hire administrators perceive gender differences in skills and abilities, and make hiring decisions that rationally maximize their organizational goals in light of such perceptions. In the same way, we argue that individuals recognize the gendered incentives and constraints of the labor market, and then rationally seek to maximize their career goals in light of those incentives and constraints.⁴

Employees (bureaucrats) and employers (agencies) in this theory are analytically inseparable, since our argument is about public administration career systems composed of both sellers and buyers of labor. Although our main claims address the actions and attitudes of individual bureaucrats, their choices are conditioned by a labor market that includes both their current employers and a set of potential future employers. We see this inescapable endogeneity not as an analytical obstacle, but as a simple fact of professional life.

Gendered career paths

If the officials responsible for hiring and promoting public administrators perceive men and women to bring different abilities to the labor market, then such perceptions will affect which individuals are selected and promoted. Individuals whose genders are associated with desired abilities will not be expected to demonstrate those abilities through lengthy experience or

⁴ Psychological explanations for gendered ambition are possible, too. For example, perceived organizational support can influence individuals' career self-management with different effects for men and women (Sturges et al. 2010). Liff and Ward (2001) used interview data to show that women's willingness to take executive positions was in part a response to their perceptions of organizational support and their prospects for success on the job. Although men and women experienced similar uncertainties in the promotion process, women interpreted these uncertainties as having a negative effect on their likelihood of success in the organization.

formal accreditation. By the same token, hiring officials will expect individuals whose genders are associated with lesser ability to demonstrate their ability through experience and accreditation.

To the extent that there is significant gender diversity in a public administration career system, any bias favoring men over women (or women over men) in recruitment and promotion will be evident in average differences between men's and women's resumes at a given level of advancement.⁵ For example, a gendered career system might demand greater tangible qualifications (e.g., experience, education, certification) of female administrators than of their male peers. In educational administration, that disparity is likely to manifest itself as slower, more qualified-on-paper advancement to management by women. Moreover, because male teachers serve disproportionately in secondary schools (the historical conduits to senior administration), we expect elementary school administrators to feature similarly slower, more qualified-on-paper advancement than secondary school administrators.

Principals who have been department heads or curriculum specialists have had opportunities to manage student-centered tasks related to instruction. In contrast, athletic coaches have had greater opportunities for contact with and influence over external stakeholders, including central office personnel and school board members. They would also be more likely to have personnel and budgetary authority, which would further burnish their credentials for promotion to higher posts. Our first two hypotheses follow:

H1. Female and elementary school principals have more educational experience and training than male and secondary school principals prior to promotion.

H2. Female and elementary school principals are less likely to have had athletic coaching

⁵ Gender bias can run in either direction and can vary across professions. For example, in professional nursing men may be disadvantaged relative to women due to social and organizational biases (Evans 1997).

experience than male and secondary school principals prior to promotion. In their “Almost Random Careers” model, March and March (1977) argued that school administrators rationally adapt to career systems in ways that result in cadres of administrators with remarkably similar qualifications. Notably, March and March did not account for gender—an understandable omission since at the time of their study superintendents were almost entirely male: the very gendered nature of the educational leadership profession precluded analysis of gender at that time. If our theory of gendered ambition is correct, significant and non-random gender differences will be evident in the qualifications of public managers.

Gendered ambition

Individual administrators respond to gendered career systems with a simultaneous process of rational adaptation. As close and interested observers of their own professions, administrators will likely recognize the gendered patterns of career advancement described in H1 and H2. If a career system is noticeably gendered in ways that favor men over women (or women over men) in advancement, then men are likely to express more career ambition than women (or vice versa), *ceteris paribus*. Gendered ambition is a rational response to the incentives and constraints created by gendered career systems. In the case of educational administration, men are more likely to maintain ambition for senior leadership posts because the obstacles to promotion are perceived as lower. In the same way, female administrators recognize additional challenges they may experience to pursue the position, and their desire to do so changes as a result. Applied to school administration in the United States, we expect that the historical development of school administration will result in female principals expressing less ambition than their male counterparts; thus our third hypothesis:

H3. Female and elementary school principals indicate less ambition for career

advancement than male and secondary school principals.

If gender conditions ambition in school administration, then public education career systems may systematically stymie elementary school leaders and promote secondary school leaders. In this way, the gendered dimension of school administration career systems may lead to marked biases in superintendents' policy agendas and management styles.

Analysis: bureaucratic ambition in a gendered career system

Our empirical inquiry proceeds in two parts. We first evaluate the expectation that public education is a gendered career system (H1 and H2) with an analysis of school administrators' career paths. We then turn to bureaucratic ambition (H3) by analyzing data on school principals' future career ambitions.

Modeling a gendered career system

Data and model. To evaluate our first pair of hypotheses we rely on data from the 2011-2012 Schools and Staffing Survey (SASS). SASS is a survey of a nationally representative sample of US schools administered by the US Department of Education every four years. A different but representative cross-section of U.S. schools are included in each iteration of SASS. The 2011-2012 data is the most recent iteration available.⁶

Principals, teachers, and district office administrators in the sample complete a series of questionnaires gauging their opinions and variety of contextual details about their school. Usefully for present purposes, respondents report on their backgrounds in education. Principals are asked to indicate their number of years of teaching experience before becoming a principal, whether they have received professional development in a program preparing aspiring principals,

⁶ In fact, the U.S. Department of Education has discontinued the Schools and Staffing Survey and replaced it with the National Teacher and Principal Survey (NTPS) initially administered in 2015. Unfortunately, NTPS does not extensively ask principals about their employment history and ambition, so we are unable to conduct our analysis using more recent NTPS data.

and the various positions in schools prior to becoming principal. The present analysis uses responses of 7,520 principals participating in SASS.

To test H1 and H2 we use the number of years of teaching experience prior to becoming a principal to assess the speed at which teachers are promoted to principals. We also examine whether principals received professional development training for becoming principals along with the positions held prior to becoming principal to describe career paths to principal. Specifically, principals indicated whether they had been department head, a curriculum specialist, or an athletic coach prior to being principal.

We use principals' years of teaching experience and past professional experiences as dependent variables in regression models that include indicators for gender and school level as key independent variables. Years of teaching experience are self-reported number of years a principal served as a classroom teacher before becoming principal. To measure past professional experience we use a series of binary variables indicating whether a principal has received specialized training for principal development and whether (s)he served in a variety of positions prior to principal. We use ordinary least squares (OLS) regression models when our dependent variable is continuous, and logistic regression for dichotomous dependent variables, but report results as marginal effects for ease of interpretation.

In addition to gender and school level, our models control statistically for a variety of principal-level and school-level characteristics that might influence career trajectories. Specifically, we include the principal's age, race, and ethnicity, and the log of the principal's salary. At the school-level, we include dummies for whether the school made adequate yearly progress according to state accountability requirements, whether the school served an urban area, and state. We control for school size with the log of enrollment. Sampling weights provided by

the U.S. Department of Education are used to maintain the national representativeness of the results. Table 1 provides a descriptive summary of the data used in this analysis.

Table 1: Summary Statistics for Schools Staffing Survey

	Mean	Standard Deviation	Minimum	Maximum
<i>Dependent Variables</i>				
Prior Professional Experience				
Years of Teaching Experience	11.77	6.53	0	40
Department Head	.40	.49	0	1
Curriculum Specialist/Coordinator	.26	.44	0	1
Athletic Coach	.36	.48	0	1
Professional Development Program for Aspiring Principals	0.55	.50	0	1
<i>Independent Variables</i>				
Female	.48	.50	0	1
Age	48.01	9.04	23	80
School Level				
Elementary	.64	.48	0	1
Middle	.16	.36	0	1
High	.20	.40	0	1
Race/Ethnicity				
White	.79	.41	0	1
Black	.11	.31	0	1
Latino	.07	.25	0	1
Other Race	.03	.17	0	1
School Locale				
Urban	.24	.43	0	1
Suburban	.27	.45	0	1
Town	.14	.34	0	1
Rural	.33	.47	0	1
Salary (in logged dollars)	11.38	.25	9.90	12.42
Charter School	.05	.22	0	1
School MET Federal Adequate Yearly Progress Benchmarks	.55	.50	0	1
Logged Enrollment	6.00	.90	0	9.21
N= 7,510				

Note: Sampling weights used computing summary statistics.

Results. Table 2 reports OLS regression results for years of teaching experience prior to becoming a principal, while Table 3 reports logistic regression results for various prior professional experiences prior to becoming a principal.

Table 2: Principals' Estimated Prior Years Teacher Experience

<i>Ordinary least squares regression</i>	Years of Teaching Experience
Female	1.826*** (.205)
Age	.323*** (.013)
Middle School	-.370* (.208)
High School	-.122 (.222)
Black	-.703** (.336)
Latino	1.078*** (.391)
Other Race	-1.378** (.559)
Suburban	-.302 (.294)
Town	.139 (.354)
Rural	.224 (.301)
Log of Salary	-2.915*** (.786)
Charter School	-1.603*** (.412)
School Met Federal Adequate Yearly Progress Benchmarks	-.246 (.215)
Logged Enrollment	.285** (.118)
Constant	23.306*** (8.600)
Observations	7,510
R ²	.257

Notes: Sampling weights included. Standard errors in parentheses. ***p<.01; **p<.05; *p<.10

Consistent with H1, we observe in Table 2 that female principals typically spend more time than male principals as teachers before being promoted to principal. Female principals on average spend nearly two more years as teachers than do male principals. Moreover, middle school principals appear to have spent less time — about 0.37 years on average — as teachers than do elementary school principals. High school principals spend an average of 0.12 fewer years as teachers than elementary school principals, although this finding is not statistically significant by conventional standards.

While Latino principals have about one more year of teaching experience than white principals, principals who are black or of other races have relatively fewer years of teaching experience. Durations of teaching experience do not appear to differ significantly between urban and non-urban schools. Charter-school principals have nearly two fewer years of teaching experience than other principals, perhaps reflecting that many charter schools are relatively new. Principals with lower salaries also report spending more years as teachers, suggesting more generally that transitions from teacher to principals are slower for districts with lower principal salaries. This pattern is not surprising, since salary is a salient incentive to seek promotion.

We find additional support for H1 in the first three columns of Table 3 with gender differences in principals' prior professional experiences. Female principals are about three and sixteen percent more likely than male principals to report having served as department chairs and curriculum specialists, respectively. Moreover, female principals are about six percent more likely to have completed professional development programs for aspiring principals. As indicated in the third and fourth rows of Table 3, elementary school principals are nearly ten percent less likely to have experience as department heads than middle and high school principals.

Table 3: Estimated Professional Experience prior to being Principal

	(1)	(2)	(3)	(4)
<i>Logistic regression</i>	Department Head	Curriculum Specialist	Completed Principal Professional Development	Athletic Coach
Female	.033* (.018)	.158*** (.016)	.064*** (.018)	-.378*** (.017)
Age	-.001 (.001)	.001 (.001)	-.004*** (.001)	-.006*** (.001)
Middle School	.091*** (.019)	-.049*** (.018)	.013 (.020)	.200*** (.019)
High School	.099*** (.019)	-.050*** (.018)	-.000 (.020)	.194*** (.018)
Black	.016 (.029)	.025 (.025)	.123*** (.032)	-.040 (.030)
Latino	-.011 (.042)	-.085*** (.031)	-.013 (.044)	.222*** (.046)
Other Race	-.046 (.052)	-.014 (.050)	.067 (.054)	-.125** (.053)
Suburban	.012 (.026)	-.042* (.023)	-.021 (.028)	.075*** (.027)
Town	.016 (.029)	-.048* (.027)	-.048 (.030)	.134*** (.028)
Rural	.037 (.026)	-.037 (.023)	-.080*** (.027)	.145*** (.026)
Log of Salary	-.036 (.055)	.039 (.053)	.071 (.058)	-.059 (.053)
Charter School	.026 (.034)	.040 (.031)	-.131*** (.036)	-.079** (.032)
School Met Adequate Yearly Progress	-.012 (.019)	-.000 (.017)	.032* (.019)	.015 (.018)
Logged Enrollment	.017 (.011)	.012 (.010)	.038*** (.011)	.020* (.010)
Observations	7,510	7,510	7,510	7,510
Pseudo R ²	.060	.046	.094	.229

Notes: Coefficient estimates are marginal effects, expressed as changes in likelihood of a principal having a past experience with a one-unit change in the covariate. Models additionally include state-level dummies. Standard errors in parentheses. ***p<.01; **p<.05; *p<.10.

This result is not surprising, given that department chair positions are more common in

secondary than in elementary schools. However, this pattern also suggests that promotion to principal in secondary schools may be more difficult for elementary school educators, who are predominantly female. Similarly, elementary school principals are about five percent more likely than their secondary-school counterparts to have experience as curricular specialists or coordinators, positions more common in elementary schools. Overall, prior professional experience and, hence, professional opportunities appear to condition the likelihood of promotion to principal positions.

Finally, female principals are nearly 40 percent less likely than male principals to have been an athletic coach. Elementary school principals are 20 percent less likely to have experience as athletic coaches. These estimates support H2 and further illustrate gendered career paths. To the extent that prior athletic coaching experience is desirable for advanced administrative positions in secondary schools, the lack of coaching opportunities in elementary schools further genders the career paths of predominantly female elementary school teachers.

Gendered ambition

Data and model. Having established a gendered pattern in career advancement for public education administration, we now turn to H3 and whether gender affects bureaucrats' ambition. To test this hypothesis we draw on the Texas Middle Managers Survey, administered to more than 3,000 Texas school principals via emails collected from the Texas Education Agency (TEA) website. Data from the Texas Middle Managers Survey were collected in approximately the same time frame as the national SASS data in 2012-2014. While the Texas dataset covers just a single state, it is a large and diverse state; moreover, we have no reason to expect that gender functions differently in the Texas school administration labor market compared with the rest of the United States, or that Texas women are systematically more or less ambitious than women

elsewhere. Unlike SASS, the Texas data span multiple school years. Its response rate was 20.7 percent in 2012, 21.9 percent in 2013, and 11.0 percent in 2014. These data were matched with data on school performance and organizational characteristics from TEA. After dropping cases with missing data, we are left with approximately 2,000 schools for analysis.

The dependent variable of interest for H3 is a measure of career ambition. For school principals, the next high-profile position available in the profession is school district superintendent. We gauge ambition with a survey question that asked respondents their level of agreement for: “One day, I plan to become superintendent.” The respondent’s choices were: strongly disagree (1), tend to disagree (2), tend to agree (3), and strongly agree (4). To ease interpretation, we standardize this measure of ambition (mean = 0, standard deviation=1.0).

Table 4: Summary Statistics for Texas Middle Managers Survey

	Mean	Standard Deviation	Min	Max
Ambition	0	1	-1.04	1.72
Gender	.57	.50	0	1
School Level				
Elementary	.58	.49	0	1
Middle	.24	.42	0	1
High	.25	.44	0	1
Race				
White	.73	.45	0	1
Black	.06	.24	0	1
Latino	.16	.37	0	1
Charter School	.04	.20	0	1
Principal Experience	8.00	6.47	0	61
Performance	75.72	12.60	12	100
Past Performance	75.65	12.96	12	100
Logged Enrollment	6.06	.93	0	8.45
N = 2,126				

Results. Our analytical results are presented in Table 5. We find support for H3’s

prediction of gendered effects on ambition, consistent with the depiction of a gendered career system that emerges from both history and our earlier analysis.

Table 5: Principal Career Ambition (Texas Middle Managers Survey)

<i>Ordinary least squares regression</i>	Career Ambition
Female	-.578*** (.051)
Middle School	.136** (.061)
High School	.507*** (.062)
Charter School	-.037 (.129)
Black	.330*** (.106)
Latino	.091 (.070)
Experience	-.025*** (.003)
Overall Performance	-.001 (.003)
Past Performance	.001 (.003)
Logged Enrollment	-.132*** (.033)
2013	-.051 (.041)
2014	.160*** (.054)
Constant	1.201*** (.242)
Observations	2,126
R ²	.205

Notes: Standard Errors in parentheses. ***p<.01; **p<.05; *p<.10

Specifically, findings indicate that female principals on average express .58 standard deviations lower ambition for career advancement than male principals, all else equal. Middle school principals are 0.14 standard deviations and high school principals 0.50 standard deviations more ambitious than elementary school principals. Some principals may have taken their jobs with explicit intention to become a superintendent, and so it is possible that these results are related to selection effects. However, as noted earlier, ambition emerges within a career system, and so is analytically inseparable from employees' choices of profession and employers' hiring and promotion decisions.

Several organizational and individual control variables are also noteworthy. School size is negatively related to career ambition, indicating that principals in larger schools were less likely to desire the superintendency. This finding aligns with Teodoro's (2011) hypothesis that ambition declines as job status increases. In all models, overall performance and past performance were not significantly correlated with ambition, consistent with prior work suggesting that improving student success has no statistical bearing on the retention and advancement of school administrators (Maranto and Wolf, 2013; Maranto et al., 2016). African-American principals are significantly more ambitious than their white peers, but Latino principals' ambition does not differ on average from non-Latino white principals'. Principal experience is negatively correlated with ambition: on average, for every ten years of experience, principals express 0.25 standard deviations less desire for promotion to superintendent.

Discussion and Conclusions

Our findings affirm the persistence of gendered career systems in U.S. public education. Compared to their male and secondary school peers, female and elementary principals on average have more years of classroom teaching experience prior to becoming principal. For

women, this classroom experience is typically accompanied by more experience as curriculum coordinators and formal professional development training. At the same time, men are more likely to have been athletic coaches on the path to administration. Our analysis also suggests that individuals respond to this gendered career system: female principals express less desire for the superintendency than do their male counterparts. Administrators' ambition is shaped in part by their gender identities, it seems; simultaneously, ambitious women may be less likely than men to choose careers in educational administration because they perceive a negative gender bias.

Similar patterns emerge for elementary school principals, who are disproportionately female. As elementary principals have on average the most teaching experience prior to becoming principals, the perceived disadvantages of moving from the elementary school level manifests in elementary administrators indicating the least interest in becoming superintendent.

Limitations

As with any empirical study, this analysis carries important limitations. We have explained theoretically the process by which a gendered labor market influences individual ambition, but we do not isolate the precise mechanism behind that process. To do so would require a counterfactual or an organization where both men and women have equal chances of entry-level and management positions. Unless we can randomly assign boys and girls of varying ambition to grow up into educators, principals, and aspiring superintendents, precise identification of these mechanisms is not possible. Short of such an opportunity⁷, perhaps the most promising way to explore the effects of gendered public administration career systems is to conduct similar studies across other fields, such as law enforcement, public health, city management, firefighting, public finance, and so on.

Theoretically, our argument proceeds in a rational choice tradition. However, this

⁷ For practical and ethical reasons, we do not advocate such an experiment, whatever its scientific merits.

orientation does not preclude models of gendered ambition more rooted in social psychology and organizational behavior. Indeed, connecting rational choice and psychological theories of gender in organizations is an important and potentially fruitful avenue for future research.

Implications for Public Management and Policy

Notwithstanding its limited scope, our finding of a gendered career system in public education carries significant implications for management and public policy to the extent that women and men manage differently. Providing equal pathways to management for men and women can promote different organizational cultures. For instance, female administrators may use their extended experience in the classroom, as department heads, or as curricular specialists to tackle policy issues in different ways, perhaps emphasizing classroom teaching more than other school functions. Women's extended experiences as street-level bureaucrats may also give these administrators different perspectives on management, and so provide for greater employee empowerment, with potential improvements in employee satisfaction and effectiveness.

Perhaps as significantly, a systemic bias in favor of secondary school principals and against elementary school principals—a likely corollary of broadly gendered career systems—produces senior administrators whose dominant focus is on secondary schools, sports and other activities, and school finance rather than relationship building and academic achievement. Historical evidence (Rousmaniere 2013) and contemporary surveys and other empirical work (Maranto et al. 2016) indicate that such foci reflect the priorities of school boards; thus gendered career paths may reflect the democratic governance of public schools. At the same time, such informal personnel practices violate 21st Century workplace norms of gender equity, and conflict with merit-based personnel systems. Moreover, the gendered backgrounds of principals — males with athletics versus females with curriculum and instruction — suggest that having more

women in principal and superintendent posts might improve schools academically through greater emphasis on instruction. Certainly empirical research has found gendered patterns of managerial behavior among school superintendents (Meier, *et al.* 2006; Johansen 2007). In short, gendered educational leadership pipelines may offer one explanation for the limited success of elite-based school reform aimed at academic excellence and equity.

That public administration careers exhibit gender bias is, alas, hardly a groundbreaking finding. Nonetheless, the history of U.S. educational administration presents an analytical puzzle with respect to gender: once an uncommon outpost of female public sector leadership, the professionalization of public education in the 20th century transformed educational administration from predominantly female to predominantly male. As public administration professions continue to evolve in an era of legal gender equity, the apparently persistent gender bias in educational administration affords an opportunity to explore the ways that individual bureaucrats respond to gendered career systems generally. Our findings indicate that in such systems, bureaucratic ambition itself is gendered; thus progress toward equality may depend in part on making women and men believe that paths to advancement are equally open to them.

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