

A Woman's Touch? Gendered Networks in State Administration*

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ABSTRACT

We investigate gender differences in networking and collaboration and, additionally, whether these variations affect the overall performance of organizations. We use surveys of state agency heads gathered through the American State Administrators Project (ASAP) from 1994 and 1998 for this study. Specifically, we begin by exploring whether women agency leaders possess and/or pursue different networks and networking behavior. We then examine if these differences transfer to the performance of the agency they lead. Ultimately, we seek to understand whether women managers contribute in consequential ways to the enhanced performance of public organizations. We rely on the O'Toole-Meier formal management model to test our expectations. Our results offer mixed support for a relationship between gender and performance, from which multiple avenues for further investigation emerge.

INTRODUCTION

In the last decade, there has been a sharp increase in the representation of females in public sector jobs and advanced degree programs, including the MPA and MPP. While the fruits of these increases have not yet resulted in complete equity between the genders, they certainly indicate significant progress. Despite greater numbers of women entering public service, when public agencies are examined by job category and functional policy area, female representation varies significantly (Bowling et al., 2006). Additionally, recent literature highlights the beneficial managerial styles and impacts of female leaders (Brudney, Hebert and Wright, 2000; Bowling et al., 2007; Meier et al. 2007). These findings underscore the need to explore more fully when and how female leadership serves as a catalyst for improving organizational processes and performance. Meier et al. (2007, 348) note: “Management appears to shape performance when conducted from multiple levels, directed internally at operations, targeted at various parts of the program’s environment, and executed with particular skill or adroitness.” In the context of representative bureaucracy, their statement pushes us to describe how and to what effect women matter in public management. In this paper, we rely on the formal model of the relationships between public management and performance generated by O’Toole and Meier (2007) to investigate differential impacts of male and female administrators on organizational performance in state government.

Our paper looks at gender differences in networking and collaboration and, additionally, whether these variations affect the overall performance of organizations. We use surveys of state agency heads gathered through the American State Administrators Project (ASAP) from 1994 and 1998 for this study. Specifically, we begin by exploring whether women agency leaders possess and/or pursue different networks and networking behavior. We then examine if these differences transfer to the performance of the agency they lead. Ultimately, we seek to understand whether women managers contribute in consequential ways to the enhanced performance of public organizations. The initial question is: Do female state agency heads network more or differently compared to male counterparts in similar leadership positions? Secondly, does differential behavior influence outcomes, such as responses to organizational change?

Two important, although diverse, arenas of research inform this work. First, as indicated above, we draw extensively on recent theoretical and empirical works in the area of public management (for a complete review see O’Toole and Meier 1999; Lynn, Heinrich and Hill 2001). Second, we turn to literature focused on gender differences and representative bureaucracy, highlighting various interpretations incorporating gender as a key management variable. Next, we review the survey data, methodology, and the empirical findings that emerge from the analysis. The paper concludes with limitations, future research needs, and implications for both researchers as well as practitioners.

This research makes several important contributions. First, we respond to the call for further explorations modeling public management in diverse contexts (Meier, O’Toole, and Goerdel 2006; Meier and O’Toole 2006). We achieve this using a large-n data set (2,000+) encompassing multiple policy areas across the fifty states to explore the role that gender plays in management and performance. Second, we expand the discussion of networks to include intermediate outcomes related to organizational processes and practices. This offers a prospective test of Meier and O’Toole’s model of management’s impact on public organization outcomes. Finally, the research incorporates and increases the role of gender differences and the literature of representative bureaucracy into the discussion of how managerial actions impact performance.

PUBLIC MANAGEMENT

The importance of understanding organizational performance and how management matters is crucial to scholars and practitioners alike. Exploration of organizational performance has a long history from a variety of disciplines spawning endless management books and initiatives. For example, Rainey (2003) emphasizes the importance of public management to contemporary governance. Ken Meier and Larry O’Toole, the “Godfathers” of empirical public management studies, have made extensive forays into the investigation of the impact of public management on performance outcomes, as well as highlighted the need for additional inquiries. They, along with many in the field, affirm that despite focused efforts on the topic, much remains unknown. Recent efforts to develop conceptual and empirical

models of governance regularly incorporate public management as a core element. These models offer significant advancement in understanding within the public administration field (Lynn, Heinrich, and Hill 2001; O'Toole and Meier 1999; Boyne, Meier, O'Toole & Walker 2005; Meier and O'Toole, 2006; Heinrich and Lynn 2000; Ingraham and Lynn 2004; Forbes and Lynn 2005; and Hill and Lynn 2005). This article joins those focused on exploring the oft asserted and intuitively accepted connection between managerial actions and public program performance. And, while empirical support for the linkage(s) has begun to build, a shortage of systematic research still remains. This is especially problematic, "particularly given the significance of the subject" (Meier and O'Toole 2006, 1).

Systematic empirical support for the connection between managerial behavior and public program performance builds primarily on the efforts of O'Toole and Meier. In 1999, they began a research effort aimed at contributing to the conceptual, theoretical, and empirical study of governance and public management. With respect to their research agenda, they note the following (Meier and O'Toole 2006, 1):

The focus was and remains on public management and performance. The objectives have been to a) distill the previous knowledge concerning public management into a concise and testable format and b) demonstrate or at least scrutinize the empirical validity of the theory with a variety of systematic tests. That research agenda has produced a series of empirical (Meier and O'Toole 2001; 2002; 2003; 2004a; 2005; 2006c; O'Toole and Meier 2003a; 2004a, 2004c; O'Toole, Meier and Nicholson-Crotty 2005) and theoretical (Meier and O'Toole 2004b; 2006a; O'Toole and Meier 1999; 2000; 2003b; 2004b; 2004c) papers by the authors (see also Nicholson-Crotty and O'Toole 2004) as well as additional papers by a second generation of scholars (Donahue et al. 2004; Hicklin 2004; Fernandez 2005; Gonzalez Juenke 2005; Hill 2005; Pitts 2005; 2006).

In their work, Meier and O'Toole (2001) have highlighted the importance of networking behavior to public management and performance, observing that in districts where superintendents engage in more network interactions, performance improves. They also find that the use of networking allows superintendents to translate resources into outputs more efficiently and that management quality has a positive effect on the overall performance of the organization in the form of reduced drop-out rates and increased student attendance (2002). O'Toole and Meier also discuss the differential effects of networking of and for different individuals -- network interactions matter most for those rated highest and

lowest in managerial quality, and teacher stability affects outcomes less when networking activities are high (2003a).

Networking is of course not the only or least disputed influence on performance. Hicklin, O'Toole, and Meier (2006) find diminishing returns exist in managerial networking. However, they also find evidence for believing that better managers understand when additional time in the networked environment does not add more to performance. O'Toole, Meier, and Crotty (2005) find that management quality, managerial stability and employee stability are positively related to organizational performance. Further, they note that "managing outward" shows the most promise for improving student performance. Goerdel (2006) further supports this model, finding that proactive management is important for improved organizational performance. On the other hand, reactive managers do not necessarily experience any change in educational performance outcomes. Additionally, managerial networking has an impact on educational performance independent from managerial quality, and managerial networking still contributes positively to performance.

A handful of scholars have expanded the management-performance research to include the impact of gender. Meier, O'Toole, and Goerdel (2006) found that men and women school superintendents manage some facets of administration differently. Using the Moore classification (1995) structure, they find that management practices focused "outward" or "upward" are similar in both men and women. The difference appears in "downward" management. Women interact less frequently with line subordinates. Interestingly, in terms of performance outcomes, however, they find that men get more positive results from "working the external environment" (32) while women are "often getting negative results" (33). Additionally, women are more successful at translating the negative consequences of managing upward than are their male counterparts. Meier, Mastracci, and Wilson (2006) find that female teachers are associated with higher student attendance, lower turnover rates, and increased student performance. These findings then beg the question: if women are spending less time on downward or internal management, what activities are they doing at other times that improves outcomes?

The management model has been examined in other settings. Thus far, empirical modeling of public management performance has included analyses of data drawn from English local governments (Andrews et al. 2005; O'Toole, Walker, Meier, and Boyne 2005), United States law-enforcement (Nicholson-Crotty 2004), state unemployment insurance programs (Wenger, O'Toole; Meier 2006), human resource management and fiscal management within state governments (Donahue et al. 2004), and international contexts (Meier, O'Toole, Boyne and Walker, 2005). To these expanding studies, we add an exploration of networking, management, and organizational performance at the top levels of state administrative agencies, specifically in the context of gender differences and the link between passive representativeness, active representation, and representative results (Bowling et al. 2006).

GENDER, REPRESENTATIVE BUREAUCRACY, AND MANAGEMENT

For decades, the question of a representative bureaucracy has been a prevalent, if not prominent, point of research by scholars of American politics and administration (Kingsley 1944; Long 1952; Mosher 1968; Krislov and Rosenbloom 1981; Meier 1993; Selden 1997; Dolan and Rosenbloom 2003). Public administration scholars have noted the multifaceted nature of bureaucratic representation. Persistent themes include the issue of passive and active representation in bureaucratic settings (Sigelman 1976; Dometrius 1984; Bullard and Wright 1993; and Riccucci and Saidel 1997) as well as connecting passive with active representation (Riccucci and Meyers 2004; Selden, Brudney, and Kellough 1998; Bowling et al., 2006). Although many aspects of networking behavior have been explored within public management, the gender "line" of academic research has produced a variety of inconclusive findings (Meier, O'Toole, and Goerdel 2006). The link between passive representativeness, active representation, and the results of representation on policies, processes, and performance is difficult to study and harder to capture.

Because of the difficulties in finding the missing link(s) in bureaucratic representation, studies have often focused on particular parts of the triangle. Some have focused mostly on passive/descriptive representation (Miller, Kerr, and Reid 1999; Riccucci and Saidel 1997; Bowling and Hong 2002).

Shifting attention to active representation has tended to focus on singular policy areas. For example, Meier and Bohte (2001) linked passive and active representation by investigating education policy in Texas. Riccucci and Meyers (2004) utilized survey data from eleven welfare offices in four states as the basis for their arguments and concluded that: “a link between passive and active representation...may exist in welfare agencies: that is, that race and gender make a difference” (p. 595). Recent efforts by Bowling et al. (2007) examine the connection between passive and active representation and organizational practices and performance across most functions of government, where they find clear associations between gender representation in bureaucracy and higher state-level administrative performance measures.

Complicating these findings, however, is that other early research uncovered mitigating factors influencing the nexus between passive and active representation, which in turn can cause shifts in public management practices as well as policy or programmatic results. Thompson (1976) and Kantor (1977) both alluded to a threshold or “critical mass” of women or minorities that may be necessary before active representation can become evident and/or influence governance. Research on the Senior Executive Service (Dolan 2000; 2004) noted the importance of working in a gendered department. The presence of women in elite positions is associated with an adoption of female-friendly policies. Sowa and Selden (2003), using data from the Farmer’s Home Administration, concluded that “the presence of [administrative] discretion is not simply an a priori condition needed to evaluate policy outcomes in testing representative bureaucracy, but is one mechanism linking passive and active representation in administrative agencies” (707).

There is also anecdotal and quantitative evidence to suggest that men and women are interested in different policy arenas, hold varied preferences, and have contrasting managerial styles. For instance, women hold more executive positions in the areas of education, health, civil rights, and social welfare (Riccucci and Saidel 1997, Bowling et al. 2006). While a “glass ceiling” may exist in agencies in other policy areas, representation in the traditionally female agencies is at least partly caused by self-selection of the women who seek these positions. Additionally, whether through cracks in the glass or changing

preferences of female administrators, the proportion of women is growing in all areas of state government leadership and across the states (Bowling et al. 2006; Kelleher, Bowling, and Wright 2006). This phenomenon increases the need to discover the impacts of female representation in the processes and performance of state agencies.

Research on the career paths of female state agency heads finds that they are younger, more likely to hold educational degrees in the traditionally female domains we mentioned above (as opposed to science or engineering degrees), more likely to be a Democrat, come from families with college-educated parents, and have worked in state government a shorter period of time than their male counterparts. Even though these disparities are narrowing (Bullard and Wright 1993; Bowling et al. 2006), they still are important differences to consider in public management research. There are also differences between men and women in the administrative and organizational goals and values they hold. Fox and Schuhmann (1999) discovered that women city managers were more likely than male managers to facilitate communication, utilize citizen input, and to encourage citizen participation in policymaking.

Brudney, Hebert, and Wright (2000) also provide a broad focus on gender impacts on organizational values. The attitudes and opinions of state agency heads across multiple arenas of state policy reveal how administrators' perceptions, values, and goals are part of the nexus in the link between passive and active representation. They conclude that "demographic characteristics have been shown to relate to critical administrative attitudes and behaviors," and "either this connection may be indirect through the organizational role set or in certain instances it may be direct" (510). Women are more likely to hold administrative values oriented toward budget stability, improving morale, effectiveness, quality, organizational reputation, and leadership.

This review of research on gender, representative bureaucracy, and public management covers only a modest segment of the vast and diverse work that stems from many disciplines and projects diverse findings. Two recent works in *Public Administration Review* by Saidel and Loscocco (2005) and Meier, Pennington, and Eller (2005) illustrate these tendencies by exemplifying both disparate focus and constrained theoretical character. Despite solid contributions of the findings of each to discussions about

gender, the dispersed nature of the field of research is illustrated by the minimal overlap between sets of references/citations in the two mentioned articles (Saidel and Loscocco 2005; Meier, Pennington, and Eller 2005). Among the total of 101 citations, only eight are common to both articles. The empirical groundings of the two articles admittedly diverge, yet both fall under the banner of research on representative bureaucracy (Bowling et al. 2006).

Research on representative bureaucracy has advanced the indication and conclusion that gender matters, albeit in varying ways. Meier, O’Toole, and Goerdel (2006) note the variety of inconclusive findings on the role that gender plays in relation to management and leadership behaviors. For example, some argue that gender has an impact on managerial and leadership styles and behaviors that, in turn, are related to more effective management and improved organizational performance. For example, Meier, O’Toole, and Goerdel (2006) propose that female managers could be views as a type of under-recognized and undervalued management capital. The note: “These normative claims are inevitably intertwined with some empirical expectations: that gender-management linkages to organizational performance rest largely on organizational context—specifically, how gender is perceived as operating in interaction with overall managerial functions in an organization; and that the managerial efforts of women in particular add value to what organizations do and produce” (24). It is to that topic we now more specifically turn.

MODEL, DATA, VARIABLES, AND METHODS

The Meier and O’Toole formal model essentially contains four variable clusters: performance, management, stability, and the environment. Meier and O’Toole (2006 working paper) note that: “Recognizing that an operationalization and full testing of this model with any existing data set is impossible, we have opted for an incremental strategy that focuses on the link between management and performance in general...within this strategic approach, we have proceeded by testing discrete portions of the model and building on the results in subsequent rounds of analysis” (6). We follow similarly, relying on a modification of their model to test the relationships between gender, management, and outcomes in a multivariate setting. Their model follows:

$$O_t = \beta_1(S+M_1)O_{t-1} + \beta_2(X_t/S)(M_3/ M_4) + \varepsilon_1 \quad [1]$$

O_t is a measure of an outcome, public program output, or organizational performance. S is a measure of organizational stability or hierarchy. The “ M ” terms deal with management, which subsequently can be divided into three parts – M_1 , M_3 , and M_4 . M_1 taps how management contributes to organizational stability through additions to hierarchy/structure as well as regular operations. In particular, it comprises internal managerial activity contributing to program stability. M_3 operationalizes management's efforts to exploit an organization’s environment. M_4 is the management's effort to buffer the unit from environmental shocks. X is a vector of environmental forces, ε_1 is the error term, and β_1 and β_2 are estimable parameters. The ratio of M_3 to M_4 taps the overall influence of network management (M_2). In our analyses, we provide a simplified version of M_2 with multiple measures based on the frequency and direction of networking contacts. We discuss these more fully later.

$$O_t = \beta_1(S+M_1)O_{t-1} + \beta_2(X_t/S)(M_2) + \varepsilon_1 \quad [2]$$

As did Meier, O’Toole and Goerdel (2006), we hold stability constant, essentially dropping it from the model (28), under the assumption that state governments are relatively stable organizations with well established bureaucracies. Although we recognize and acknowledge the theoretical importance of this element of the model, the inclusion of such a measure offers distinct methodological challenges.

$$O_t = \beta_1(M_1)O_{t-1} + \beta_2(X_t)(M_2) + \varepsilon_1 \quad [3]$$

Finally, our model is not autoregressive due to the nature of the dataset. We combine individual surveys of state agency heads from two time points, 1994 and 1998. The samples in each are different, thus prohibiting the prediction of later attitudes and perceptions with an individual’s prior responses. The final model we estimate is:

$$O_t = \beta_1(M_1) + \beta_2(X_t)(M_2) + \varepsilon_1 \quad [4]$$

MEASUREMENT(S) OF PERFORMANCE

Major testing of the O’Toole-Meier formal model has been conducted using management and performance in Texas school districts, although they note the intention to move the theory and research to

other contexts. For example, Meier, O'Toole and Goerdel (2006) wrote, "[A]dditional studies on this question, as well as studies conducted in public organizational settings beyond Texas and outside public education, are needed to probe the issues more thoroughly" (2006, 33). The call for more empirical investigation of governance holds center stage for many researchers and continues to create a quest for this "Holy Grail" in understanding public management.

Meier, O'Toole and Goerdel (2006) note that "Although women managers' interactions differ from men's in terms of only one of these functions (managing downward), the impacts of managerial activities on organizational performance are unquestionably influenced by gender" (2006, 33). We explore the applicability of their conclusion in an alternative setting, and, in doing so respond to the call for additional research in alternative contexts.

We utilize data from the American State Administrators' Project (ASAP) to apply the O'Toole-Meier model to an alternative context -- state agencies. Responses to mail questionnaires received from state agency heads in over 90 different types of agencies (for example, Medicaid, mental health, corrections, transportation, etc.) provide the empirical base for variables that measure the attributes, activities, and actions of state administrators. ASAP surveys secured representative replies from 1000-1500 agency heads at two junctures in each of the past four decades (1964, 1968, 1974, 1978, 1984, 1988, 1994, 1998) and the current decade (2004, 2008 (planned)). We rely here exclusively on the data collected during the 1990s (Wright, Cho, and Hatcher 2006) due to the particular variables on which we are focusing.

In 1994 and 1998, the ASAP survey had a total of 1,213 and 1,158 respondents, respectively. Pooling the two years together gives a total of 2,371 respondents for entire decade, with 78 percent of those men and 22 percent women. Further, these data include measures of what we consider to be intermediate managerial activities and performance outcomes, including networking. This application offers potential insight not only as a state level analysis in multiple policy areas, but also into conceptual and empirical efforts to understand how gender and management matters in relation to organizational performance. Analyses of these data have already identified noteworthy changes in gender

representativeness at the top levels of state bureaucracies (Hebert and Wright 1982; Haas and Wright 1987; Wright, Yoo, and Cohen 1991; Bullard and Wright 1993; Bowling and Wright 1998; Bowling et al. 2006).

ASAP surveys include a range of questions covering attitudes, attributes, behavior, contacts, and networking patterns of the agency heads. Measures of contacts and networking were chosen based on two recognized approaches to operationalizing network behavior – the frequency of contact and directionality. We supplement analyses with a number of other variables from the survey tapping individual-level personal attributes and professional characteristics. The next section explains the variables included in greater detail.

MEASUREMENT(S)

Four components comprise the model we employ in this analysis. They are (a) outcomes, (b) management, (c) control variables, and (d) interaction terms.

Outcomes

O is a measure of some outcome, program output, or performance. Scholarship has often noted the challenge raised by measuring outcomes or performance, as determining appropriate measures is extremely difficult (Lynn, Heinrich and Hill 2001; Donahue et al. 2004) given the multiple range and depth of outcomes pursued by public organizations. The absence of common outcomes across a variety of agencies with many different functions in the 50 states made finding common overall outcomes additionally challenging. In this analysis, the outcome measures we employ are tied to the implementation of *Reinventing Government* initiatives and could be considered intermediate organizational outcomes. The data is drawn from responses from the head or leader of each of the state agencies. The implementation of these two sets of organizational reforms taps important procedural and performance-related issues for these administrative leaders. Additionally, these works have been confirmed and employed by previous works (Brudney, Hebert, and Wright 1999; Brudney et al. 2006).

Specifically, the two dependent variables measure different dimensions of the implementation of *Reinventing Government* in the states in the 1990s. They are based on a series of survey questions

(eleven items) from two ASAP surveys (1994 and 1998). Brudney et al. (2006) identified structural/process and performance/results groupings of reforms using confirmatory factor analysis (CFA). Examples of structural/process activities include the simplification of human resource rules, discretion to carry over year-end funds, privatization, reduced hierarchy, decentralization, and greater discretion in procurement. Performance/results oriented reforms include training programs to improve customer satisfaction, quality improvement programs, benchmarks, strategic planning, and systems for measuring client satisfaction. Administrators were asked to report the degree of implementation of each. The options were from zero (no changes considered) to a score of four (fully implemented). CFA established the integrity, coherence, independence, validity, and reliability of the two dimensions (Brudney et al. 2006).

Management

We include four measures of management, tapping M_1 and M_2 from Meier and O'Toole's model. M_1 taps management's contribution to organizational stability through additions to hierarchy/structure as well as regular operations. The measure of M_1 is a survey question that asked administrators to report the percent of their time spent on internal management, which taps how administrators spend their time relative to the day-to-day, internal operations of their agency. This variable ranges from zero to 100 percent with a mean of 49.03 percent.

The three measures of M_2 , or networking behavior, are constructed from responses evaluating the frequency and initiation of contacts with significant principal actors within and beyond state government. These variables are all additive scales derived from a series of questions dealing with the nature of networking. The first variable measures the frequency of contacts with the governor, the governor's staff, legislators, and legislative staff. Administrators were asked to note the frequency with which they have phone or face-to face contacts, with each on a scale ranging from zero (never) to four (daily). The additive scale for all four contacts ranges from zero to 16, with a mean of 8.08. Second, similar measurement of administrator contacts with clientele groups and citizens produced another additive scale, ranging from zero to eight (mean of 5.74). The third measure of M_2 taps the direction of initiation of

contacts with political principals. Administrators were asked what percentage of contacts they initiated with the governor, governor's staff, legislators, and legislative staff. (Selection options were 20, 40, 60, 80, and 100 percent.). Another additive scale combined these gubernatorial and legislative contacts into a measure which ranges from zero to 20 with a mean of 7.27.

Control Variables and Interaction Terms

We include both individual and organizational characteristics as control variables. These represent aspects of both managerial quality and the unknown (X) component of the model -- the vectors indicating environmental forces. An agency-level control was agency size -- the number of employees in the agency headed by the administrator. Individual-level controls included the education level of the administrator, how they were appointed to their position, years served in state government, and finally, gender. These variables capture various aspects of the executive's position as well as individual characteristics, with gender a central focus. To explore the conditionality of management techniques for women versus men on performance outcomes, we included a series of interaction terms between each of the M variables and gender. Also, the data set includes both 1994 and 1998 responses, and thus, a dummy variable for 1998 was included to control for expansions in the spread of reinventing government features (Brudney and Wright 2002). Descriptive statistics for all variables are found in Table 1. We pursue both descriptive and explanatory analyses to understand elements of the model we describe above.

Insert Table 1 here

FINDINGS AND DISCUSSION: EXPECTATIONS AND DESCRIPTIVE FINDINGS

Research on the links between gender and management began primarily by looking at female-male differential frequencies. Authors recently (Donahue et al. 2004) have expanded questions to address the complexity of measuring and explaining network behavior. This paper uses such recent work as a starting point; thus, we examine both the frequency and directionality of networking, especially the initiation of contacts by women versus men. We begin our analyses with descriptive patterns exploring the relationship between gender and networking behavior.

Insert Table 2 and 3 here

Management and the leadership literature often portray women as focusing more on building relationships with their internal staffs and less on the leadership or brokering aspects of work. However, Meier O’Toole, and Goerdel (2006) found that women spent less time managing “downward,” which suggests lower emphasis on internal management. We look to the ASAP data for additional clarity of this murky area. ASAP surveys have regularly garnered responses on three important elements of a state administrator’s job – percent time spent on (1) internal management, (2) policy development, and (3) public support. For each of these activities, a statistically significant difference between men and women appears. However, it is the men who spend a greater mean percentage of their time on internal management matters (50 percent compared to 45 percent for women) – a finding consistent with the more recent research by Meier, O’Toole, and Goerdel (2006).

Alternatively, women spend a greater percentage of time working in the areas of policy development and gaining public support. This is consistent with scholars who argue that women are more likely to be transformational leaders. These leaders make large-scale and dramatic organizational changes. Although we do not know the scope of the changes in women-led agencies exactly, we do know that securing even a small degree of change in public organizations would likely require major focus on policy development as well as securing stakeholder support. One also could argue that perhaps women have to work harder in these areas just to keep up with men. Since women often have a harder time accessing top management positions, their chances are enhanced if they develop mentoring relationships. This would place a premium on practicing “upward” networking before as well as perhaps after securing top posts. It is not surprising, then, that female managers spend more time on policy development activities than internal management. Previous research would also lead us to expect that women, who are often seen as more inclusive leaders, spend more time on garnering public support (Fox and Schuhmann 1999).

Despite finding that women spend more of their time on policy development and developing public support, we find that the frequency of their contacts with citizens as well as the governor and legislature are less frequent than for men, as depicted in Table 3. Perhaps they have less developed

networks with these particular groups, and thus, it requires a greater percentage of their overall time allocation. Alternatively it could be a factor of the types of positions held by women. It may be that women are more likely situated in functional categories that are less central on the governor or legislator's agenda. What all of these findings elucidate, however, are that clear differences between men and women do exist for networking patterns. The subsequent question becomes, then, whether these behaviors translate into differential organizational outcomes. We now turn to explanations for organizational performance within the public management model.

Findings Related to Public Management Model and Gender

The work of O'Toole and Meier resulting in the model employed in this paper highlights the importance of how managers spend their time. They clearly draw in networking as an important element of how a manager both buffers and exploits the environment (M_2) while also ensuring that internal management functions and stability (M_1) are undertaken. Our main findings with respect to gender are that despite initial indications of differences in the bivariate analyses, the effect of gender is actually more complex and varied in more comprehensive model specifications. These results are depicted in Tables 4 and 5. Other factors included in each model were more predictive of the implementation of organizational reforms, including how state administrators spent their time, who they had contact with, and whether or not they initiated that contact. Many of these findings are consistent with previous research on the O'Toole-Meier model.

Insert Tables 4 and 5 here

The first model examines the implementation of structural reforms, including decentralized decision-making, reduced hierarchy, greater procurement discretion, simplified human resources rules, privatization of major programs, and discretion to use carryover funds. The results indicate that there are five significant predictors in the model, all of which have a positive impact on the outcome. The exception is the percent of time spent on internal management (our proxy measure for M_1), which is negatively signed.

This finding, at face value, is surprising. Internal management is an important component of effective organizational performance. While previous research hypothesizes and reports strong positive relationships, given that M_1 is about maintenance and internal management (an activity that contributes to program stability), it is more understandable that a negative impact appears if we are looking at elements of change as the outcome measure. Time spent on internal matters and maintenance aspects may decrease the amount of attention and momentum devoted to transitional and transformational changes.

While the finding on internal management was contradictory to initial expectations, the effects of other variables were in expected directions. Measures of the frequency of contact and the initiation of contact (measures of M_2) both were positive, supporting the claim that it is important to not only conduct managerial networking, but that proactive effort also has positive results. The notion that networks can be used to exploit the environment seems consistent in this finding. The significance of the network measures (M_2) is consistent with previous research (Meier and O'Toole, 2001; O'Toole and Meier, 2003; Meier and O'Toole 2003; Meier, O'Toole, Crotty, 2004; Meier, O'Toole, and Crotty 2005; Goerdel, 2006; Donahue et al., 2004; Hicklin, O'Toole, and Meier 2007). Additionally, larger agencies were more likely to implement Reinventing Government, as were respondents appointed to their position. Larger agencies may have more staff and resources available to undertake the structure reform efforts, and those serving at the pleasure of the governor are also more tied to reforms that he or she may have been advocating. Finally, gender was an insignificant predictor, with no relationship observed for men versus women on the implementation of structural or process-oriented reforms.

The second model (Table 4) examines the achievement of reforms tied to results/performance. The dimensions comprising this index include: strategic plans for clear mission statements, training programs to improve customer service, quality improvement programs, benchmarking to measure outcomes, and measurement of customer satisfaction. Here, quite interestingly, gender is statistically significant (albeit at a slightly relaxed level, $p < 0.10$), with women driving a greater implementation of reforms tied to performance. Thus, as compared to the insignificant results discussed in the previous model, it appears that the effects of women do vary across different program outcomes, with their

stronger influence being on reforms such as strategic planning, training, benchmarking, and measuring customer satisfaction.

Additionally, there are several variables, including multiple network behavior measures (M_2), with a strong positive impact. Internal management, surprisingly, does not appear to have a significant impact in this model. The frequency of contact with government stakeholders (governor, governor's staff, legislature and legislative staff) and citizen and client groups was statistically significant and positive. Greater initiation of contact with key state level political actors (governor, legislature, governor's staff, and legislature's staff) had a positive impact on performance-associated reforms. Interaction with citizens and clientele groups, while insignificant in the previous model (structure reform), was significant in this second model dealing with performance reforms. Since this outcome captures customer service elements and measurement of customer satisfaction, it makes sense that interactions with these groups are both relevant and positive. Above, we noted that female leaders were more likely use changes to enhance performance. Earlier, though, we demonstrated that women leaders had less contact with elected leaders and citizens than men. Given these findings, we must wonder if performance improves in organizations led by women *if* they do have more contact outside the agency, or if other factors help women leaders manage performance improving changes.

Thus, similar to Meier, O'Toole, and Goerdel (2006), we tested the interaction of gender and each of the management indicators. The aim was to see if the management practices of women versus men have differing effects on outcomes. Across both reform dimensions, there are two statistically significant interaction terms – one in the structure model, and one in the results/performance model. Both, however, are significant at a relaxed, exploratory level ($p < 0.10$), and interestingly, these significant observed relationships are negative. For women, networking behaviors are not as valuable in shaping organizational outcomes as for men. More specifically, for structural outcomes, increased frequency of contacts with gubernatorial and legislative principals has a detrimental effect for women. Perhaps women are more likely to have negative contact with elected officials than men. With respect to performance, the initiation of contacts appears to decrease the utility of networking for women. Thus, in short, certain

networking behaviors help men more than women in the achievement of Reinventing Government initiatives.

Models run separately for females and males, presented in Table 6, produce additional interesting results. For males, three of the four networking measures are highly significant in predicting the achievement of structural reforms, and two for performance. Networking more frequently and initiating more contact with the governor, legislature, and their respective staff aids male agency heads in the adoption of structurally-oriented reforms. More time on internal management, however, actually decreases the adoption of structural changes. For women, however, across both models, only one example of networking behavior has a significant effect – contact. As women contact state executives and legislative leadership and staff, they are more successful in implementing results/performance reforms. However, initiation does not appear to matter, nor does contact with citizens or clientele groups. And, interestingly, internal management does not serve as a detriment to the achievement of these reforms as it does for men.

Insert Table 6 here

Thus, from these results, one might conclude that networking does not “pack the punch” for women that it does for men. With respect to education, we observe some similarly interesting results. In the “structure” model, educational attainment is significant for females, yet not for males. More highly educated women are more successful in the implementation of structural reforms. This may be because female agency heads in general are more likely to have higher educational attainment than men (Bowling et al. 2006). For performance, we observe significance for both genders; both men and women with higher levels of educations are more successful implementing performance-focused organizational changes. Additionally, in the structure model for males, over eight percent of the variance is explained – a percentage higher than any other value reported in previous models. Thus, isolating the genders of respondents increased the fit and boosted the explanatory power of this model. The model for females does not predict nearly as well. We are left pondering why these results might be so, and, more importantly, what their implications are as we educate the next generation of public servants. These

findings highlight the complexity involved with understand how gender (more specifically women) impacts procedural and performance-linked changes.

Thus, despite initial results that demonstrate significant differences in means with respect to how administrators spend their time and who they interact with, more sophisticated results indicate much less subtle differences in behavior. A potential concern is that the distribution of gender in the data is so heavily weighted to men that they are driving the model. The simple distribution is an interesting story in and of itself. Despite major advances in terms of equality in state government, the sample still shows that over 77 percent of state administrators are male. Perhaps then, women have not yet achieved the “critical mass” necessary for effective organizational change that other scholars have discussed. As the number of female agency heads continue to increase, will the impact of their efforts become more apparent? Alternatively, women who achieve these high posts in state government may have unique qualities and characteristics that remain unexplored. These puzzles clearly require further refinement and investigation.

An important caveat is that the models presented here have very low R^2 values, explaining on average only about five percent of the variance. But, given that we are looking at multiple states and at multiple functions across states, this is not necessarily surprising. In conclusion, we find general support for the O’Toole-Meier Model. Additionally, we find evidence of select differences between women and men in their networking behaviors and how they ultimately shape agency outcomes. Clearly, however, additional research is necessary to further tease out the nuances of these relationships and patterns.

CONCLUSION

Previous research on representative bureaucracy, women’s management and leadership styles, and select public management research indicates that there is support for the notion that gender plays a role in organizational performance. Concurrently, research on organizational performance has seen significant advancement and refinement both theoretically and empirically. The development in both areas motivated our investigation of the intersection between these concepts. Initial descriptive

investigations revealed significant variation by gender for network behavior, which is an element found elsewhere to have critical impact on organizational performance. Interestingly, while women spend less time on internal management and less frequently contact the governor, the legislature, and citizens, they spend a greater percentage of time on policy development and cultivating public support. The disconnect between the time spent and the frequency of contact raises interesting questions for future research. Do women see less need to make contact or rather, do they lack well developed contacts to buffer their organization or exploit the environment effectively? Must women, in effect, work harder to secure results? Is network behavior a choice or a political necessity? Additionally, are women deliberately spending less time on internal management because they are more sophisticated managers that develop staff and are less likely to micromanage? Or, are they inappropriately ignoring the need for internal stability and consistent management? Meier, O'Toole, and Goerdel (2006) found that women achieved less positive outcomes from working the network. Does this begin to explain why we see women having less contact with key political stakeholders?

Despite these initial differences, when gender is integrated in a more sophisticated multivariate setting to predict organizational outcomes, the results are slightly more mixed and complex. We found support for the use of the O'Toole-Meier management model with several different variables demonstrating predictive power. Additionally, we observed a relationship between gender and performance. Finally, there was also significance for two of the interaction effects tapping the effects of gender and networking on outcomes in the models. Interestingly, these interaction effects were both negatively signed, indicating that networking behaviors are less important and valuable for women than they are for men. These results both complement and contradict with Meier, O'Toole, and Goerdel (2006), who also find that being a woman impacts performance, albeit in varying ways. However, our findings contrast their conclusion that “[w]omen managers are able to convert the negative impacts of managing upward... into positive results” (p. 333). We clearly do not find a similar pattern when focused on the reinventing government initiatives.

This article makes several contributions in understanding the complex world of public management. First, we offer additional insight into the O’Toole-Meier model through application to a more diversified geographical area (the fifty states) and a broader functional set of actors. The findings indicate interesting insights not just to the model but to our understanding of state administrators’ influence and behavior. While our findings indicate that the application of this model in alternative settings proves valuable, there is clearly still a need for additional development in data and analysis. As can be seen in much of the previous research (and claimed by scholars in this area) it is challenging to assemble a data set fully capable of testing the full range of the components of this model simultaneously. We believe that this research pushes this model and highlights that there is much still to be learned about the applicability of this model to alternative settings as well as the behavior of our state administrators, key actors in the lives of citizens. Our use of reinventing government reforms as the dependent variable provides a unique alternative measure of organizational outcomes, and thus points to the utility of a multi-dimensional examination of leadership and performance that includes change as well as consistent basic service delivery.

Second, this work continues to argue for the furthered development and expansion of how we conceptualize, operationalize, and integrate networking behavior in public management research. Initial measures of networking most often conceptualized it in terms of frequency. More recently, however, research has begun to recognize initiation as well as the nature of interactions. Additionally, research is expanding to acknowledge the varied partners involved in networking to incorporate those both inside and outside government. Networking and collaboration expands beyond intra-organizational behavior to inter-organizational and extra-organizational contacts as well.

Third and finally, this research points to interesting differences between men and women – not only with respect to how they network, but also to what they are able to achieve with respect to their organization’s reforms and initiatives. In terms of representative bureaucracy, these findings leave us with even more questions about the link between passive representation and active representation, and the results created when the bureaucracy becomes more diverse, especially in terms of increasing numbers of

women in all functional areas. How do women lead differently than men? Why are their networks different from male leaders, and what are the effects?

Of course, this research is not without limitation. First, the O'Toole-Meier model speaks to the importance of autoregressivity. However, we cannot similarly incorporate this term into our modeling due to the nature of our data (1994 and 1998) and the fact that respondents are not identical for both years; thus, their opinions cannot be linked. However, we acknowledge its importance and encourage its continued inclusion in future research when possible. Second, finding adequate measures of outcomes across states, sectors, and functional areas remains a challenge for researchers interested in organizational performance. Identifying performance indicators in public bureaucracies has long been an issue in this area of research, with little agreement on consistent, operational measures of performance. This contrasts fields such as education, where outcomes such as test scores are consistently collected and readily available. Third, measuring the effects of gender is very difficult when a critical mass of women in many areas remains unachieved. For example, in the ASAP data, in some functional areas such as natural resources, energy and environment, and criminal justice, the percentages of women still hover between seven and fourteen percent (Bowling, et al. 2006). Fourth, although we were pleased to find statistically significant relationships, the R^2 is small, and clearly, further work is needed to more comprehensively explain the phenomenon of organizational performance. For example, in future work, we plan to incorporate a hierarchical linear modeling strategy that simultaneously investigates both individual and state level factors (such as partisan identification of the governor and legislature). Additionally, we plan to investigate more fully the role of agency function in explaining some of the results found here. In conclusion, although a slight stretch from the specific results presented here, we challenge those in the field of public management to explore how the issues raised in this and related research relates both to practitioner behavior as well as the training and preparation provided for those entering public service, especially female.

TABLES

Table 1. Measurement of Variables Employed in the Analysis

Variable Name	Definition	N	Min	Max	Mean	SD
% Internal Management	What percent of your time spent on internal management	2379	0	100	49.03	21.54
Contact with Governor, Legislature, Governor's Staff, and Legislative Staff	An index measure of the frequency of contact with the governor, the governor's staff, the legislature, and the legislative staff	2297	0	16	8.08	3.17
Initiated Contact with Governor, Legislature, Governor's Staff, and Legislative Staff	An index measure of who initiates contact with the governor, the governor's staff, the legislature, and the legislative staff	2250	0	20	7.27	4.07
Contact with Citizens and Clientele Groups	An index measure of who initiates contact with citizens and clients	2287	0	8	5.74	1.76
Number of Employees in Agency	The number of employees employed by the agency	2356	0	74,000	995.50	3298.85
Education	The level of educational attainment of respondent	2355	1	5	4.30	0.99
Appointment	If the respondent was appointed to the position	2343	0	1	0.52	0.50
Years in State Government	The number of years the respondent has been employed in state government	2360	0	52	15.07	9.48
Dummy 1998	If the response is from 1998 or not	2398	0	1	0.49	0.50
Reinventing government (Structure)	Additive sum of scores on decentralized decision-making, reduced hierarchy, greater procurement discretion, simplified human resources rules, privatization of major programs, and discretion to use carryover funds	2229	0	24	9.29	5.26
Reinventing Government (Performance)	Additive sum of scores on strategic plans for clear mission statements, training programs to improve customer service, quality improvement programs, benchmarking to measure outcomes, and measurement of customer satisfaction	2229	0	20	14.01	3.52

Table 2: Comparison of Time Spent by ASAP Respondents by Gender 1994, 1998, and 2004 (merged data sets)

	Gender	N	Mean	Mean Difference
% <i>Internal Management</i>	Male	2464	50.26	5.35*
	Female	729	44.91	
% <i>Policy Development</i>	Male	2457	24.02	-3.49*
	Female	726	27.51	
% <i>Public Support</i>	Male	2455	24.26	-2.02*
	Female	728	26.28	

*p<0.05; Independent Samples T-Test; Equal Variances Not Assumed

Table 3: Comparison of Contact Frequency of ASAP Respondents by Gender 1994, 1998, and 2004 (merged data sets)

Contact	Gender	N	Mean	Mean Difference
<i>Governor</i>	Male	2439	1.36	0.11*
	Female	722	1.25	
<i>Governor's Staff</i>	Male	2446	2.33	0.07
	Female	726	2.26	
<i>Legislature</i>	Male	2443	2.19	0.14*
	Female	724	2.05	
<i>Legislative Staff</i>	Male	2443	2.11	0.05
	Female	719	2.06	
<i>Clientele Groups</i>	Male	2424	2.77	-0.01
	Female	717	2.78	
<i>Citizens</i>	Male	2436	2.83	0.17*
	Female	720	2.66	
<i>Contact Governor, Legislature, and Staff of Governor and Legislature</i>	Male	2422	7.98	0.39*
	Female	711	7.60	
<i>Contact Citizens and Clientele Groups</i>	Male	2414	5.60	0.17*
	Female	710	5.43	

*p<0.05; Independent Samples T-Test; Equal Variances Not Assumed

Table 4. Regression Results for Structure and Performance Reform Models

	Structure	Result/Performance
Constant	5.366*** (0.892)	11.159*** (0.598)
M1 Measures		
% Internal Management	-0.17** (0.006)	-0.006 (0.004)
M2 Measures		
Contact with Gov, Leg and staffs	0.246*** (0.042)	0.059** (0.028)
Initiated with Gov, Leg and staffs	0.080** (0.031)	0.057** (0.021)
Contact with Citizens and Clients	0.035 (0.071)	0.099** (0.047)
Gender	-0.059 (.0288)	0.325* (0.191)
Controls		
Number Employees	0.00*** (0.00)	0.00** (0.00)
Education	0.210* (0.118)	0.208** (0.079)
Appointment	0.579** (0.249)	0.121 (0.166)
Years in State Government	0.035** (0.013)	0.013 (0.008)
Dummy 1998	0.448* (0.232)	0.895*** (0.155)
R²	0.067	0.045
F	13.855	9.243
n	1939	1987

Note: * p < .10 ** p < .05 *** p < .01

Standard errors are in parentheses

Table 5. Regression Results for Structure and Performance Reform Models with Interaction Effects

	Structure	Result/Performance
Constant	5.045*** (0.933)	11.161*** (0.624)
M1 Measures		
% Internal Management	-0.16** (0.007)	-0.008* (0.004)
M2 Measures		
Contact with Gov, Leg and staffs	0.282*** (0.047)	0.047 (0.031)
Initiated with Gov, Leg and staffs	0.078** (0.035)	0.076*** (0.024)
Contact with Citizens and Clients	0.034 (0.071)	0.100** (0.047)
Gender	1.448 (1.227)	0.218 (0.811)
Interactions		
Initiated Gov Leg* Gender	0.008 (0.072)	-0.082* (0.048)
Contact Gov Leg*Gender	-0.179* (0.099)	0.057 (0.066)
Internal Mgmt*Gender	-0.003 (0.015)	0.005 (0.010)
Controls		
Number Employees	0.00*** (0.00)	0.00** (0.00)
Education	0.214* (0.118)	0.201** (0.079)
Appointment	0.571** (0.249)	0.116 (0.166)
Years in State Government	0.034** (0.013)	0.013 (0.008)
Dummy 1998	0.452* (0.232)	0.902*** (0.155)
R²	0.069	0.046
F	10.926	7.384
n	1939	1987

Note: * p < .10 ** p < .05 ***p < .01
Standard errors are in parentheses

Table 6. Regression Results for Structure and Performance Reform Models by Gender

	Structure MALE	Structure FEMALE	Result/Performance MALE	Result/Performance FEMALE
Constant	5.235*** (1.003)	5.909** (1.866)	11.176*** (0.672)	11.364*** (1.267)
M1 Measures				
% Internal Management	-0.15** (0.007)	-0.021 (0.014)	-0.007 (0.004)	-0.005 (0.009)
M2 Measures				
Contact with Gov, Leg and staffs	0.260*** (0.048)	0.130 (0.094)	0.039 (0.032)	0.117* (0.063)
Initiated with Gov, Leg and staffs	0.073** (0.035)	0.091 (0.067)	0.078*** (0.024)	-0.015 (0.045)
Contact with Citizens and Clients	0.074 (0.080)	-0.044 (0.158)	0.138*** (0.053)	-0.022 (0.105)
Controls				
Number Employees	0.00*** (0.00)	0.00 (0.00)	0.00** (0.00)	0.00 (0.00)
Education	0.124 (0.133)	0.548** (0.256)	0.177** (0.089)	0.327* (0.174)
Appointment	0.707** (0.280)	0.115 (0.543)	0.044 (0.187)	0.384 (0.362)
Years in State Government	0.031** (0.014)	0.041 (0.032)	0.009 (0.009)	0.027 (0.021)
Dummy 1998	0.579** (0.260)	-0.161 (0.519)	0.903*** (0.173)	0.891** (0.345)
R²	0.084	0.039	0.049	0.042
F	15.556	1.780	9.011	1.994
n	1534	404	1567	419

Note: * p < .10 ** p < .05 ***p < .01
Standard errors are in parentheses

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