Gender Roles, Workforce Composition, and Management Style: Female Commanders and Policy Decisions in Police Organizations

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Abstract

Scholars have long debated whether men and women manage organizations, both public and private, differently. This work has arrived at varied conclusions regarding the differences that exist and the factors that may condition such differences. One strain of this research suggests that women may manage more like men in male-dominated organizations. Drawing on Social Role Theory, this study develops the opposite expectation that female managers may actually adopt a more feminine management style when they manage primarily men. More specifically, it argues that female managers simultaneously occupy both gender and organizational roles when leading and that they may be penalized for violating the former when they adopt an aggressive masculine style. It hypothesizes that women will seek to minimize this gender role conflict by adopting a more participatory and inclusive style than male counterparts when managing male-dominated organizations. It offers the expectation that the differences between female and male managers will diminish as the proportion of female employees increases. I test these expectations in analyses of a sample of 273 police organizations drawn from across the United States in the year 2000.
In 2004, women were named as the Chiefs of Police in 4 major U.S. cities including Boston, San Francisco, Milwaukee, and Detroit. The appointment of 4 women in the same year to the top jobs in major metropolitan departments prompted the Associated Press to predict a “shifting paradigm in policing – from an emphasis on a paramilitary structure to one more reliant on communication and community relations” (Tresta 2004). The AP’s speculation about the consequence of these high profile appointments betrays a very old and very durable assumption about female leaders—namely that they manage organizations in a fundamentally different fashion than their male counterparts.

Assumptions about the differences between male and female managers have persisted in-part because of ingrained gender stereotypes, but they also survive because the scholarly literature on the management of public (and private) organizations has not offered a definitive answer regarding any gender differences that may exist. A significant number of studies find that the differences in the styles or effectiveness of male and female managers are relatively inconsequential (See Eagly et al. 1995 for a review). Alternatively, some research does find substantial differences in the leadership of men and women, demonstrating that the latter adopt more interpersonal styles, are more democratic or participative in their management techniques, or have higher levels of rule abidance, among other things (see for example Gilligan 1982; Powell 1993; Hatcher 2003; Portillo and DeHart-Davis 2009). In an attempt to reconcile findings of difference and similarity, a prominent line of research has focused on the ways in which the culture and structure of organizations accentuate or obscure differences between male and female managers (See for example Bass 1990; Eagly and Johannesen-Schmidt 2001).

This study builds on this third tradition by exploring the ways in which the gender of subordinates changes the context of leadership and, consequently, the ways in which women
manage public organizations. The idea that female leadership styles might be conditional on the
gender make-up of their workforce is implied in existing work on gender and management (see for
example Kanter 1977; Dolan 2000), which generally expects that women will manage more like men
in male-dominated organizations. The assumption being that they will do so in order to avoid
organizational role conflict arising from employee expectations that equate the manager role with
stereotypically masculine characteristics. Interestingly, however, direct empirical tests of this
assumption are rare (though see Gardener and Tiggeman 1999).

Drawing on Social Role Theory (see Eagly & Johannesen-Schmidt 2001), this paper argues
that the focus on organizational role behavior in previous work has ignored the gender role that
female managers must simultaneously occupy when leading an organization. Research suggests that
women may be penalized for violating these gender role expectations, particularly in the assessments
of male employees, when they adopt an aggressive masculine style (Eagly et al. 1992). This paper
develops this argument, ultimately drawing a testable implication that runs counter to the existing
literature. It suggests that female public managers will adopt more feminine styles when managing a
predominately male workforce and become less distinguishable from their male counterparts as the
proportion of female personnel increases.

The paper tests that argument in an analysis of women in high-level management positions
in large police organizations across the Unites States. Specifically, it explores whether the proportion
of women in leadership positions is associated with more participatory management, more employee
discretion, and other factors often attributed to a more feminine management style. The results
suggest that female leadership of police organizations does correlate with these characteristics, but
only in those organizations with relatively few female sworn officers. As the proportion of women
line personnel increases, female led organizations become indistinguishable from those led by men.
Literature on Differences between Male and Female Managers

As noted above, the scholarly literature has reached rather mixed conclusions regarding the differences between male and female managers in both the public and private sectors. This literature is vast and difficult to treat comprehensively in this setting. As such, this section provides an illustrative, though admittedly incomplete, review of work that 1) argues for real distinctions between male and female managers, 2) suggests few meaningful differences between men and women, and, finally, 3) examines the factors that may condition gender differences.

Feminist critiques of bureaucracy provide a theoretical foundation for expecting differences in the management styles of men and women. Generally speaking, these works emphasize the authoritative, patriarchal, and depersonalizing nature of hierarchical structures, with special attention to the deleterious consequences of such structures for women in an organization (See for example Ferguson 1984; Iannello 1992; Acker 1990). Taken together these works imply that women will manage differently because the replacement of traditional male leadership styles and structures with those emphasizing participation, power sharing, consensus, connection, and empowerment, is the most likely way for women to succeed (Britton 2000, 422). Popular (and primarily anecdotal or personal) accounts of leadership targeted at practitioners similarly assert that female leaders, compared with male leaders, are less hierarchical, more cooperative and collaborative, and more oriented to enhancing others’ self-worth (see for example Book 2000; Rosener 1995).

Some social scientific analyses of management have borne out these expectations. Research has suggested that, though the differences are small, women are more likely to adopt a democratic or participatory style of leadership (Eagly and Johnson 1990; Bass and Aviolio 1991). Previous work also indicates that women may be more inclined to the development of cooperative relationships
and interactive styles of management (Riger 1993; Burke and Collins 2001).¹ Women appear to be better suited to “transformational” leadership styles, where managers establish themselves as role models and use trust and confidence to induce subordinates to follow (see Bass 1985; Eagly et al 2003).² In public sector specific research, authors have uncovered differences in “task-oriented” management behaviors of principals (Eagly, Karau, Johnson 1992). They have also suggested that female managers in municipal governments spend less time on internal management and networking activities than do their male counterparts (Jacobsen et al 2008), while female superintendents engage in less interaction with subordinates and less external networking relative to men (Meier, O’Toole, and Goerdel 2006).

Alternatively, a large body of scholarly work on the leadership behaviors of men and women has concluded that few meaningful distinctions exist. Kanter (1977) was among the first to suggest that any observed differences are likely a function of the different positions within organizations occupied by men and women. Thus, what appear like distinct management styles are actually an artifact of the organizational structure, which tends to place women in less powerful positions than men. Narrative reviews of select works from the gender and management literature have typically reached similar conclusions (See Nieva & Gutek 1981; Bass 1981; Bartol and Martin 1986). Studies suggest that, while men may be perceived as more effective (Bass 1990), there is no systematic evidence that men and women differ on actual metrics of effectiveness (Hollander 1992; Powell 1993). Eagly and Johnson (1990) conclude that, while experimental studies often reveal stereotypic differences between the genders, organizational studies of actual leaders suggest little difference in style, other than the tendency of women to be slightly more democratic.

¹ Though see Eagly, Karau, and Johnson (1992) for the finding that women and men do not differ on measures of interpersonal management.
² Though see Mandell and Pherwani (2003) for the conclusion that women are not more likely to be transformational managers.
There are a couple of bodies of work in gender and management which offer possible reconciliation between competing findings of similarity and difference. Contingency theory suggests that leaders’ effectiveness depends on the interaction between their individual leadership style and the needs of the organization or position (see reviews by Bass 1990; Yukl & Van Fleet 1992). If men and women have consistently different leadership styles, their effectiveness may be a function of the type of position they occupy. The second line of conciliatory research recognizes that managers simultaneously occupy multiple roles when leading. More specifically, Social Role Theory suggests that leaders occupy roles defined by the organization and by their genders, or at least by beliefs about the typical attributes of men and women (Eagly & Johannesen-Schmidt 2001; Eagly & Johnson 1990; Eagly, Wood, & Diekman 2000) and that the genders may behave differently when there is a disconnect between the expectations arising from these two roles (Eagly & Karau, 2002; Eagly et al 2003). This argument will be explored in more detail in subsequent sections.

**Organizational Roles, Gender Roles, and the Impact of Workforce Gender**

Literature on the management of both public and private organizations reaches very mixed conclusions about differences in the styles and effectiveness of male and female leaders. This section develops the argument that the gender make-up of the workforce may help to predict those differences. Before turning to that theoretical argument it is important to recognize that the idea that women may behave differently in organizations with different gender compositions is not new. Theoretical and empirical arguments regarding tokenism offer related expectations regarding the impact of peer-group composition on the behavior of women in organizations. Kanter (1977) notes that the achievement and satisfaction of females is lower in male-dominated work groups because token women often come under greater scrutiny, experience isolation, and get pigeon-holed into stereotypical roles that undermined their status. A large body of work has confirmed these assertions.
in both public and private settings (see Spangler, Gordon, and Pipkin 1978; Ott 1989; Krimmel and Gormley 2003; Yoder and McDonald 1998)

Most relevant to this study, authors have also suggested that the gender composition of the organization may influence the leadership styles of women. These works commonly emphasize that employees, particularly men, expect occupants of leadership roles to have characteristically masculine traits (Powell & Butterfield 1994; Schein & Davidson 1993; Deal & Stevenson 1998). Authors have suggested that, in order to minimize the organizational role conflict that may arise when a woman occupies such a position, female managers may adopt a more masculine style in male-dominated organizations. Empirical tests of this assertion have, however, produced mixed findings. For example, Eagly and Johnson (1990) find that, across the studies in their meta-analysis, an increase in the proportion of male subordinates did reduce the differences between male and female managers on interpersonal versus task-oriented management styles, but actually correlated with an increase in the likelihood of female manager’s adopting a more democratic style. Gardiner and Tiggemann (1999) similarly find that women were more likely than men to use interpersonal styles in female dominated organizations, but not in those where the bulk (>85%) of employees and managers were male. Their study does not, however, test for differences in democratic or participative management styles in these organizations.

This empirical evidence is not strong enough to justify a simple acceptance of the assertion that women will adopt more masculine management styles in male-dominated organizations. Moreover, it is important to gain a better understanding of the ways in which the gender of the workforce influences female managers because it may help to reconcile long standing questions about the differences, if any that exist between male and female managers. This section presents the argument that the focus on organizational roles ignores the importance of gender roles, which female managers simultaneously occupy. More specifically, it draws on Social Role Theory, and
particularly ideas of role incongruity, to develop the expectation that female leaders will work to reduce gender role conflict by adopting more feminine management styles and policies when working in male dominated organizations.

As noted above, Social Role Theory assumes that both leadership and gender roles influence the behavior of managers and help to explain differences between male and female styles and effectiveness (see Eagly & Johannesen-Schmidt 2001; Eagly & Johnson 1990). Leadership roles are defined as the shared expectations placed on managers by virtue of their formal position in the organizational hierarchy. These are similar to social role expectations placed on persons who occupy specific social positions (see Biddle 1979). Gender roles, alternatively, are the expectations that apply to a person based on their socially identified sex or the characteristics that members of the society assume persons of a given sex typically posses.

Role incongruity occurs when the expectations of simultaneously occupied leadership and gender roles conflict or are in some way contradictory. Research suggests that such conflict most often arises for female managers and can be traced to a host of sources. It can arise because the qualities traditionally associated with the leadership role are more stereotypically masculine than feminine (Powell 1993; O'Leary 1974). It can arise because of gender- or sex-role “spill-over,” from the broader society, where research suggests there are significant and persistent doubts about women’s competence to lead (O'Leary 1974; Riger and Galligan 1980). This perspective suggests that even when roles and expectations defined by an organization for a male and female manager are identical, they may fill those roles differently because of external (and internalized) expectations about their genders (Gutek & Morasch, 1982; see also Schein 2001). Role incongruity for women is more likely to occur when they occupy leadership roles that are traditionally heavily male-dominated, because these are most associated with masculine characteristics and produce the greatest violation of gendered expectations (Eagly et al 1995; Gutek and Cohen 1987).
There are reasons to believe that a male dominated workforce may also contribute to increased role incongruity for female leaders. When researchers began examining the potential divergence between gender and manager stereotypes, evidence suggested that both men and women associated successful leadership with typically male characteristics (Schein 1973). Eventually, studies began to suggest, however, that women’s ascription of inherently male qualities to the leadership role had diminished, but men’s stereotypic beliefs appeared stable (Brenner et al. 1989). Following almost 30 years of research on the subject, Schein (2001: 684) concludes that “men have continued to see women in ways that are not complimentary vis-à-vis succeeding in positions of authority and influence.” The continued association of leadership traits with masculine characteristics among men helps to explain evidence that male employees consistently evaluate female managers more critically than their male counterparts (Eagly et al 1992; Sinclair and Kunda 2000).

Role incongruity, whatever the cause, can have a significant influence on the behavior of female managers. When female leaders violate gender expectations, they may encounter prejudice, which can include biased performance evaluations (Bass 1990). Eagly, Makhijani & Klonsky (1992) find that women leaders are judged more negatively, particularly by a male-dominated workforce, when their management style is stereotypically masculine. Interestingly, research also suggests that women may attempt to minimize role conflict by adopting a more feminine leadership style that would better meet traditional expectations about female behavior (Eagly et al. 1995). This should be particularly true in male dominated leadership roles because of the potential for very negative reactions to women practicing an aggressive masculine style (Eagly and Johannesen-Schmidt 2001).

I argue that the likelihood of role incongruity for female managers, and the probability that they will minimize it by adopting more feminine leadership styles, should also be higher when they are managing a male-dominated workforce. Returning to the original motivating question for this study regarding the differences between male and female public managers, this suggests that a
woman might manage similarly to a male counterpart occupying the same position if her workforce were sufficiently female, but would likely manage differently if her workforce were predominately male. Distilling this into a specific testable hypothesis, I expect that:

_Hypothesis 1:_ Women public managers will be associated with organizations that reflect more feminine leadership styles than those led by male counterparts when the organization employs primarily men, but the organizations led by the two genders will become less distinguishable as the number of female employees increases.

**Exploring the Differences between Male and Female Leaders in Police Organizations**

I test this expectation in an analysis of large police organizations around the United States. These organizations are a useful place to test for the factors that may condition gender difference in management behavior for a variety of reasons. First, they are among the most common of public agencies, with more than 18,000 state, county, and municipal policing agencies spread throughout the nation (Census of State and Local law Enforcement Agencies 2000). Additionally, there is sufficient variation in female leadership and female employee density to allow gender differentiation to be visible. In a representative sample of large police organizations in 2001, women made up between 1 and 42% of sworn officers, and occupied between 0 and 34% of top command positions (Lonsway et al 2002). Finally, police organizations are among the most hierarchical and traditionally male dominated types of organization. Given evidence that both male and female managers are socialized to adopt the expectations of their organizations very early in their careers (Feldman 1976; Terborg 1977; Meier and Nigro 1974), these types of organizations should be the ones where gender differences in leadership behavior are least likely to occur. This study expects differences under some circumstances and the selection of police organizations biases against that result, providing a stringent test of the hypothesis.

**Data**
The sample for the study consists of 282 police organizations surveyed by the National Center for Women and Policing (NCWP) in 2000. The organization originally sent surveys to a representative sample of 344 law enforcement agencies identified in by the Bureau of Justice Statistics as having 100 or more sworn officers. The overall response rate was 82% and data were weighted so that responses were representative in terms of both organization size and agency type. The sample includes state police agencies, county sheriffs, and municipal police departments. While these are all nominally police organizations, they obviously differ on a host of important characteristics, including level of government, leadership selection, organizational structure, scope of functional and geographic responsibility, and numerous others. Including all three agency types offers both benefits and challenges. On the one hand, the different structures of these organizations contributes to the generalizability of the findings, which is obviously a matter of concern given that the analyses are being conducted only in police agencies. At the same time, however, the differences across these organizations make it inappropriate to treat them as directly comparable in a statistical model. In order to deal with this problem, I estimate fixed effects for agency type (i.e. state police, county sheriff, and municipal police). This allows each type of agency to have its own intercept and means that coefficients only reflect the impact of independent variables on the dependent variable within organizational type. In other words, municipal departments are only being compared with municipal departments, sheriff’s offices are only being compared with sheriff’s offices, and so on.

Data on the gender composition of policing organizations collected by the Center for Women and Policing were merged with data from the 2000 Law Enforcement Management and Administration Statistics (LEMAS) survey. The LEMAS survey is administered every 1 to 4 years by the Bureau of Justice Statistics to the universe of large and a sample of small police organizations around the nation. It collects detailed information about the size, composition, function, and management of those organizations used the create all of the non-gender related variables discussed
below. Because the LEMAS includes the population of police organizations over 100 officers and the Women and Policing Survey is drawn from that sample the overlap is almost perfect. I am forced to drop two organizations because of missing data, leaving an analyzed sample of 280.

Dependent Variables

The most consistent finding of difference between male and female managers suggests that the latter are likely to be more democratic and inclusive in their management styles (see for example Eagly and Johnson 1990; Bass and Aviolio 1991). It is difficult to capture a concept like “democratic leadership” with a single indicator, so I instead take a multiple measures approach, modeling several dependent variables that each capture some component of this idea. The first measures the density of formally articulated standard operating procedures within the organization. Standard operating procedures are typically used in organizations to limit discretionary decision-making and ensure consistency in outputs across the organization (March and Simon 1958; Thompson 1967; but see Feldman and Pentland 2003). A feminist approach to bureaucratic structure and operation suggests that such limitations preference male characteristics and employees and, therefore, women should prefer fewer formal rules and greater employee discretion (see Britton 2000). I argue that women managing organizations with few female officers will adopt more feminine management styles in order to minimize role conflict and should, therefore, maintain fewer formal standard operating procedures than male counterparts. As with the other dependent variables, I expect that these differences will decrease as the proportion of female employees increases. The actual dependent variable utilized in this analysis is SOPs per officer, in order to normalize the measure across organizations of different size, which are likely to have different needs regarding routinization. The measure was again collected in the LEMAS survey.
The second dependent variable is a count indicator of the use of “problem solving” policing methods. A Community Policing model, which emphasizes more personalized policing and better relationships between the police and the community, has replaced the traditional “professional” model in many jurisdictions (Trojanowicz et al. 1998). Collaborative problem solving is an integral theoretical component of community policing, but the actual use of the technique is far from universal (see Skogan et al. 1999). In the sample of organizations analyzed herein, only 49% encouraged problem solving projects and only 44% suggested that they had created problem solving groups. When problem solving techniques are formalized by the organization, they encourage members from different levels of the police organizations and key stakeholders in the community to develop solutions to problems of crime, delinquency, etc…. In other words, problem solving groups are an inclusive and participatory management technique. As such, I expect that organizations with female managers and few female officers will be more likely to form such groups than those with male managers. The differences between organizations led by men and women should diminish as the number of female officers increases. The measure of problem solving groups was collected in the LEMAS survey and is coded 0 for groups that do not encourage problem solving projects or form groups for this purpose, 1 for those that do one of these things, and 2 for those organizations that do both.

The third dependent variable is a count indicator of collective bargaining, coded 0 if neither sworn or nonsworn personnel are able to collectively bargain, 1 if either of these groups have this right, and 2 if both do. Research suggests that, under the right circumstances, collective bargaining allows police and other public employees to influence not only pay and benefits, but also the rules and operations of the organizations in which they work (See for example Ichniowski, Freeman, Lauer 1989; Moe 2009). In other words, it is a mechanism for employee participation in organizational governance. Based in the argument that they will be more likely to adopt a democratic
or inclusive style, I expect that women managers in organizations with few female officers will be more supportive of collective bargaining than will their male counterparts. Alternatively, as the percent of women in the organization increases, I expect those differences to diminish. The measure was collected in the LEMAS survey. 57.1% of the organizations in the sample allow employees to collective bargain

The final dependent variable is a count measure of network activity with stakeholder groups. It ranges from 0 to 9 depending on the number of groups (i.e. advocacy organizations, public agencies, youth groups, neighborhood associations, etc…) with which the police organization regularly meets. I include the measure of networking because research suggest that such activities can be an inclusive and boundary spanning management tactic (see Feldman et al. 2006; Provan and Kenis 2007) and, therefore, might be associated with a more feminine management style. Interestingly, however, recent work on gender and management has found no difference or that men are slightly more likely to engage external networks than their female counterparts (Meier et al. 2006; Jacobsen et al. 2009). I suggest that this may be because they have not controlled for the moderating impact of employee gender on managerial behavior. I expect that women will network with stakeholder groups more than men when the organization is male dominated, but that the distinctions will diminish as the number of female officers increases.

Independent Variables

The primary independent variables in this analysis capture female management of police organizations, the number of female officers, and the interaction of these variables. Female management is measured as the proportion of top command positions occupied by women. Top command positions are Chiefs, Deputy/Assistant Chiefs, Commanders/Majors, and Captains, or
their equivalent. These data are collected by the National Center for Women and Policing (Lonsway et al. 2000). The measure ranges from 0 to 33.3% and has a mean of 5.6%.

This is the most appropriate measure for this study for a variety of reasons. First, women are estimated to occupy the very top spot (i.e. Chief, Sheriff, etc…) in only 2% of law enforcement organizations. Thus, the numbers that appear in samples like the one used in this analysis are quite small. This makes comparisons with male counterparts dependent on the behavior of only a handful of women and, therefore, potentially unreliable. The proportion is also an appropriate measure because in large organization, like the ones being studied here, many important policy decisions will be made members of the command team. For example, the formation of problem solving groups will often take place at the station level and be driven largely by the Captains of those stations. Similarly, proposed standard operating procedures are often reviewed and preliminarily approved or denied by deputy chiefs in charge of specific topical areas (e.g. internal affairs, community relations, technology, etc…). Obviously, the head of these organizations has the ultimate authority over policy, but the necessary delegation of authority to subordinates in command positions makes the proportion of women in those positions a good measure for comparing the relative management styles of men and women.

As noted above, I expect that the number of female employees within an organization may help to account for observed differences between male and female managers. Thus, all models include the percent of sworn officers in each police organization that are women. These data were collected by the Center for Women and Policing (Lonsway et al. 2000). The average organization in the sample has 9.9 percent women, but the figure varies from .9 to 42.1%. All models also include a multiplicative interaction between the percent of top commanders that are women and the percent of sworn officers that are women. This allows for a direct test of the hypothesis that the gender makeup of the workforce moderates the management styles of female leaders.
Controls

All of the models discussed below contain a set of variables intended to control for alternative causes of the dependent variables. All were gathered in the 2000 LEMAS survey. First, I include an indicator of the jurisdictional population per sworn officer, assuming that organizations which are spread thin across a large jurisdiction are likely to be managed differently. I also measure task complexity with an indicator of the number of functions for which the organization is responsible (e.g. dispatching calls, maintaining 911 services, operating jails, serving civil warrants, etc…) (See Nicholson-Crotty and O'Toole 2004). Models include an indicator of organizational size, measured as the number of full-time sworn officers employed in 2000. They also include the annual budget in the same year, normalized by the number of full-time officers, as a measure of wealth. Finally, the models include dichotomous indicators of organizational type. This addresses the problem of comparing very different organizational types discussed above. Dummy variables for municipal police and Sheriff’s departments are included in the models, while state police are treated as the excluded category.

Methods

Before moving on it is important to note the possibility of reciprocal causation in these models and specify an estimation strategy to address the problem. Because these are cross-sectional data on police organizations it is possible that an observed relationship between female managers and policies associated with a feminine management style might be driven by the policies themselves, rather than by the actions of women commanders. In other words, rather than women commanders instituting collective bargaining or fewer SOPs, it may be that organizations that already have these policies are the ones where women are most likely to be hired and to succeed. Indeed, research suggests that the gender context of organizations does influence the success of women (see Britton 2000).
The best way to deal with endogeneity of this sort in cross-sectional data is via a structural equations approach where an equation predicting the dependent variable of interest and equations predicting the potentially endogenous independent variables can be estimated simultaneously. This procedure allows the analyst to determine the causal direction of the observed relationship between dependent and independent variables and eliminate the bias in estimated coefficients arising from endogeneity (See Wooldridge 2008 for a discussion). Using three-stage least squares (3sls), I estimate the following set of simultaneous equations:

Equation 1:

\[
\text{PercentFemaleOfficers} = \alpha + \beta_1 \text{SOPs} + \beta_2 \text{CollectiveBargaining} + \beta_3 \text{ProblemSolvingGroups} + \beta_4 \text{Networking} + \beta_5 \text{MaximumPayOfficers} + \beta_6 \text{PercentBlackOfficers} + \beta_7 \text{Sheriff} + \beta_8 \text{Municipality} + \beta_9 \text{Swornofficers} + \beta_{10} \text{BudgetperOfficer} + e
\]

Equation 2:

\[
\text{PercentFemaleTopCommanders} = \alpha + \beta_1 \text{SOPs} + \beta_2 \text{CollectiveBargaining} + \beta_3 \text{ProblemSolvingGroups} + \beta_4 \text{Networking} + \beta_5 \text{PercentFemaleOfficers} + \beta_6 \text{PercentFemaleSupervisors} + \beta_7 \text{MaximumPayChief} + \beta_8 \text{PercentBlackOfficers} + \beta_9 \text{Sheriff} + \beta_{10} \text{Municipality} + \beta_{11} \text{Swornofficers} + \beta_{12} \text{BudgetperOfficer} + e
\]

Equation 3:

\[
\text{Policy} (\text{i.e. SOP, Collective Bargaining, etc...}) = \alpha + \beta_1 \text{PercentFemaleTopCommanders} + \beta_2 \text{PercentFemaleOfficers} + \beta_3 \text{PercentFemaleTopCommander}^* \text{PercentOfficers} + \beta_4 \text{Sheriff} + \beta_5 \text{Municipality} + \beta_6 \text{Functions} + \beta_7 \text{Swornofficers} + \beta_8 \text{Populationperofficer} + \beta_9 \text{BudgetperOfficer} + e
\]

As these equations indicate, the models of female officers and female commanders control for some additional factors, including the maximum pay available to officers and chiefs respectively, and the organization’s generalized commitment to diversity—measured as the percent of black officers.\(^3\)

Additionally, the model of female commanders (Equation 2) includes the percent female officers within the organization and the percent of supervisory roles (lieutenants, sergeants, etc…) occupied by women.

\(^3\) The measure of Chief pay has been converted to quintiles to deal with very wide variance across departments.
The additional variables in equations 1 and 2 are the exogenous instruments that allow the system of equations to identify. Officer pay and the organization’s commitment to diversity should influence how many women enter the police force, but not the policies that the organization adopts. Pay for Chiefs, used here as a proxy for pay offered to Commanders, along with the organization's commitment to diversity, and the percent of women supervisors (a proxy for the available labor pool for Commanders) should predict female commanders in an organization, but not the policies adopted by it. The instruments vary somewhat in their predictive power depending on the policy being modeled in the 3rd equation, but when estimated as 2-stage least squares, all models produce F tests greater than 10, which suggests that the instruments are valid. If the models are run as instrumental variables regressions, instrumenting percent women and percent women commanders with officer pay, chief pay, percent black officers, and percent women supervisors, both the Sargan and Basmann tests suggest that the models are overidentified.

Findings and Discussion

**Standard Operating Procedures.** The findings from the third stage of 3sls model of standard operating procedures per officer are presented in the first column of Table 1. Generally speaking, the model performs well, explaining 38% of the variation in the dependent variable. The controls suggest that Sheriff’s offices and municipal departments maintain more SOPs than do state police organizations. Similarly, it appears that organizations with fewer resources, in terms of officers per population, and those with greater task complexity, measured as the number of functions that the organization is asked to perform, promulgate fewer SOPs.

(Approximate position of Table 1)

Of course, the real findings of interest relate to the gender makeup of the workforce and the management team and the interaction of the two. It is important to reiterate that these results
represent the impact of female top commanders and officers on SOPs after the potential impact of that and other more participatory policies, as well as a host of other factors, on those variables has been accounted for in the other equations in this system. The negative and significant coefficient on the measure of women in top command positions suggests that organizations led by a greater number of women are likely to adopt fewer SOPs relative to the number of employees. The interaction term is positive and significant, however, suggesting that the likelihood that female commanders will promulgate fewer rules decreases as the number of female officers increases. Calculating the marginal effects with other variables held at their means suggests that move from 1-standard deviation below to 1-standard deviation above the mean percentage of female commanders produces a decrease of .011 SOPs per officers when the organization employs only 4 percent, or 1-sd below the mean level, of female officers. This represents a substantively large impact of .61-sd. In an organization that employs 14 percent female officers (+1-sd), however, the same increase in female commanders produces no significant decrease in SOPs.

This result is consistent with the expectation offered above. In order to reduce role conflict, female managers adopt more feminine styles and policies, in this case increasing employee discretion by reducing the number rules governing behavior, when leading male-dominated organizations. As the proportion of the work force that is female increases, and the need to minimize gender role conflict decreases, women managers gravitate toward organizational roles and their managerial styles become indistinguishable from men occupying the same role.

**Problem Solving Techniques.** The model of problem solving techniques is presented in the second column of Table 1. The coefficient for top female commanders is positive and significant, suggesting that organizations with more women leaders are more likely to institutionalize collaborative problem solving as a policing technique. As expected, the interaction term is negative
and significant, however, indicating that the positive relationship between these variables diminishes as the percent of female officers increases. Calculating marginal effects with other variables held at their means or modes suggests that in agencies with 1-sd fewer than the mean level of female officers an increase in female commanders produces an increase of .28, which is equivalent to .35-sd. Alternatively, in organizations with 1-sd more than the average percentage of female officers, the same change in women commanders produces no significant increase in the use of problem solving techniques.

The findings regarding the relationship between female commanders and collaborative problem solving and the moderating impact of female officers on that relationship provide evidence for the hypothesis offered above. They suggest that female executives attempt to minimize role conflict in male dominated organizations by adopting more inclusive and participatory policies than do their male counterparts. As the organization they lead becomes more feminine, decreasing the likelihood of perceived gender role violations in the eyes of subordinates, female commanders adopt leadership styles that are indistinguishable from their male counterparts.

**Collective Bargaining.** The model of collective bargaining, is presented in Column 3 of Table 1. It does not appear that female police managers are more likely to implement collective bargaining for employees. The coefficient on the measure of top commanders is not statistically distinct from 0. The interaction term is also insignificant, indicating that female commanders are not related to collective bargaining regardless of the level of female officers. This is obviously contrary to the expectation offered above. The finding may arise because this is simply a policy area, like many others noted in the literature, where male and female managers do not differ in significant ways, regardless of the gender context of the organization. Alternatively, the null result may arise because whether or not collective bargaining is permitted for municipal, county, or state employees is a
decision that is made above the police organization level in some jurisdictions (e.g. by the city council, county commissioners, or state legislature). Thus, women managers might manipulate that policy in order to minimize gender role conflict where they are able, but the organizations in which they do not have discretion over the policy confound the results. The fact that both the main effect and interaction terms are in the expected direction suggests that this is plausible, but obviously more research is needed to identify the true underlying explanation.

**Networking.** The final model, predicting the propensity of police organizations to network with stakeholder and community groups is presented in the fourth column of Table 1. The results suggest that even after modeling the influence of these factors on presence of female leadership, that variable is still positively and significantly related to networking activity. The interaction term is negative and significant, however, suggesting that the female commanders network less as the percent of female officers within the organization increases. The marginal effects suggest that, in organizations with 1-sd fewer than the mean level of female officers (4%), an increase from 1-sd below to 1-sd above the mean in female commanders causes an increase of 2.5 in the number of groups with which the organization meets regularly. In organizations with 1-sd more than the average concentration of women officers, the increase in networking activity associated with more female commanders drops to 1.2 additional groups. When the percent of female officers reaches 24%, more the relationship between women in top command positions and networking activity actually becomes negative, though it is not statistically discernable from 0. These results are, once again, consistent with predictions offered above regarding the behavior of female leaders in different gender contexts.
Conclusion

A large body of research has explored the organizational factors that might condition gender differences among male and female managers. Scholars have suggested that the gender of the workforce might be one such factor and have typically assumed that differences are more likely to disappear when women manage male-dominated organizations. Alternatively, this work draws on Social Role Theory and notions of role incongruity between organizational and gender roles to develop the contrary expectation that differences are most likely to be most evident when women manage primarily male employees. More specifically, it suggests that women minimize gender role conflict arising from male employee stereotypes by adopting more feminine management styles and policies. As the proportion of workers evaluating them becomes more heavily female, women managers face less gender role conflict and adopt policies and styles more similar to their male counterparts.

Even after explicitly modeling the potential endogeneity between organizational characteristics and the hiring and promotion of women, the results suggest that female commanders of police organizations adopt different policies than their male counterparts when leading predominately male organizations. They also suggest, however, that those differences diminish or disappear as the percent of female officers increases. This result obviously requires confirmation in other organizational settings, but it provides some evidence that women managers may focus on minimizing gender, rather than organizational, role conflict when leading male-dominated organizations. This leads them to adopt more feminine, rather than more masculine, styles in these settings.

When Kanter (1977) initially suggested that women managers behave differently depending on gender context, she described workgroups with less than 15% women as male-dominated. Below
that threshold, she argued that women would experience the increased scrutiny, isolation, and stereotyping that might influence their perceptions and behavior. Interestingly, in this study it is at approximately 14% female officers that an increase in female commanders ceases to have an impact on the density of standard operating procedures. Under that threshold, in what Kanter and others (see Gardiner and Tiggemann 1999) identify as male-dominated organizations, women leaders institute fewer of these policies relative to male counterparts, but above it, the two groups become indistinguishable. The threshold is essentially the same for the relationship between female commanders and the use of collaborative problem solving. This suggests that some of the earliest work on gender and management continues to offer accurate predictions about the levels of women in the workforce at which we should expect to observe differences in the behavior of male and female managers.

The findings regarding networking behavior also invite comparisons with previous research. In an organizational setting where women constitute approximately 80% of employees, Meier et al. (2006) find that women managers network less aggressively than their male counterparts. Across a range of agencies where the mean percentage of women is 22%, Jacobsen et al. (2009) find that women network less than or similarly to male managers, depending on the measure. Consistent with that work, this study finds that women manage less substantively, or the same statistically, compared with male counterparts when leading organizations with approximately 24% female employees. In organizations that employ less than 16% women, however, it finds that women network more with stakeholder groups than do men. Thus, the findings herein suggest that sample characteristics may explain the finding in previous work that women “manage outward” (Moore 1995) to a lesser degree than do men.
References


Table 1: 3-Stage Least Squares Estimates of the Impact of Women Commanders on Policies in Law Enforcement Organizations

<table>
<thead>
<tr>
<th></th>
<th>SOPs</th>
<th>Problem Sol.</th>
<th>Collective Barg.</th>
<th>Networking</th>
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<tr>
<td>Percent Women Commander</td>
<td>-0.0014038</td>
<td>0.2776915****</td>
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<td>0.000994</td>
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<td>Percent Women Officers</td>
<td>-0.002557****</td>
<td>-0.0735694*</td>
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<td>Women Com. X Women Off.</td>
<td>0.0000601*</td>
<td>-0.0092745***</td>
<td>-0.0014804</td>
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<td>0.0000351</td>
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<td>Budget Per Officer</td>
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<td>-3.66E-07</td>
<td>1.51E-06**</td>
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<td>6.72E-07</td>
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<td>Population per Officer</td>
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