FINAL REPORT

Gender and Professional Worklife in State Transportation Agencies:
Female Leaders in State Transportation Agencies

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This report examines some successful career patterns women have followed to become leaders in state transportation agencies. Traditionally, men have dominated professional and managerial positions in state agencies although the number of women in these positions has increased since the 1980s (Kelly et. al., 1991; Guy, 1992; Kelly and Newman, 2001). Gender discrepancies are acute in highway and transportation agencies (Bullard and Wright, 1993). The New Jersey Department of Transportation (NJDOT), for example, employed 1,203 men as professionals and 239 men as officials/administrators in winter 2001; its employment figures for women in the two categories were 387 and 57, respectively (Sperrazza, 2001a&b). Municipal transportation agencies also have few senior female employees (Reid, Kerr and Miller, 2001)

Transportation agencies face two gender problems. One is how to increase hiring of entry-level female professionals. The other is how to develop female professionals so that the best ones move into the elite section of the official/administrator ranks. All agencies need to use personnel effectively, but this caveat is particularly true for contemporary state transportation agencies. Over the last decade, departments of transportation (DOTs) outside the western part of the country experienced a reduction in full-time employees while their workload increased (Alarid, Hood and Albright, 1999). During this period of downsizing, DOTs underwent a greater turnover rate among senior managers than at any other time in their history (Hoel, Perfater and Shea, 1993). The 1990s also saw downsizing at transportation-related authorities. The Port Authority of New York and New Jersey, for example, imposed a hiring freeze and laid off hundreds of experienced workers; commentators spoke of a “brain drain” (Doig, 2001:400).
Downsizing in transportation agencies led to less depth of capability and experience; leaders had fewer candidates to choose from in making promotions.

Constraints on employee numbers precipitate the current agency need for succession planning to maximize the ability to develop each employee who remains. Career planning for female employees is a particular concern given the low numbers of women at elite levels and relatively high female turnover rates (Hoel, Perfater and Shea, 1993). If state agencies can develop more female talent, they will have a larger pool of qualified aspirants for high-level positions and that pool will be more representative of the citizens whom agencies serve.

Organizations develop workers by identifying skills employees need for target positions and the job paths that provide those skills in appropriate increments (Hall and Hall, 1976). To develop female employees, state transportation agencies need information on education and job paths successful female executives use to acquire skills. One way of getting this information is to analyze strategies used by individual women who have attained career success and to note common aspects among those strategies.

**Methodology**

This study is based on interviews of successful transportation women who constitute a key information source for developing female personnel. From February to July 2001 I conducted sessions with 10 women who have served in senior management ranks in Delaware, New Jersey, New York or Massachusetts’ state transportation agencies--DOTs, authorities or commuter transit organizations. Their careers include DOT positions at the assistant commissioner level or higher, authority positions as senior executives, facilities managers or chief engineers, and commuter transit positions as
program manager. They have worked in the following state or interstate agencies:
Delaware Department of Transportation, New Jersey Department of Transportation, New
Jersey Transit, South Jersey Transportation Authority, Port Authority of New York and
New Jersey, Niagara Frontier Transportation Authority, Massachusetts Executive Office
of Transportation and Construction, Massachusetts Department of Public Works, and
Massachusetts Turnpike Authority.

The sample was created by asking several people in the New Jersey Department
of Transportation for names of women who had successful transportation careers at the
state level. When interviewing women on the list, I asked them for further names. Each
interview lasted from one to two hours. In the relatively unstructured sessions,
participants emphasized those aspects of their careers that they thought were most
important. The agency managers spoke about their educational backgrounds, career
paths, mentors, networks, family life, and the gender climate in their organizations. Prior
studies identified in subsequent sections suggest that these variables influence career
success. Although the small sample size underscores a need for caution in interpreting
results, the interviews enlarge understanding of how these elements work in a state
transportation agency context. The interviews allow us to analyze what transportation
organizations can learn from successful careers to motivate and develop female
professionals. By understanding the experiences of successful transportation women,
agencies can design policies that will be better able to support them. [For a similar
research strategy with businesswomen, see Gordon and Whelan (1998).]
Educational Background

Traditionally, transportation agencies favored civil engineers for managers because they were most likely to understand the technical side of the work. In the last decade, however, agencies opened important positions to other types of engineers and non-engineering generalists (“Caltrans Responds,” 1998; Hoel, Perfater and Shea, 1993). One reason for the shift may be a decrease in the number of civil engineering graduates, another may be a recognition that non-technical backgrounds also produce people with good management skills.

Nine of the women I interviewed have non-engineering undergraduate degrees; a majority of these degrees are liberal arts baccalaureates in history or the social sciences. Eight women have masters degrees, most in professional disciplines: transportation management, business administration, public management, etc.

Very few of the women expected to go into transportation when they were in college. Most first jobs were in other fields such as education, journalism, publishing, foreign service and conservation. Several women used the word “serendipitous” and one the word “circuitous” to describe the functional trajectory of their careers.

The non-engineers were often surprised and relieved to learn that their employers did not consider their backgrounds problematic. One woman was offered a project manager’s job at New Jersey Transit. When she noted that she was not an engineer, her boss said, “It’s a management job.” Another woman explained in our interview that her employer saw her lack of technical background as a plus because she was able to view issues in a different way. Several women stressed that their value to the organization lay in their strategic mindset, problem-solving ability and skill in translating for engineers.
what customers and agency officials wanted. Women with a liberal-arts background often enriched their technical and managerial skills with an in-career master’s degree.

Career Paths

To attain successful careers, recently hired agency professionals have to move along viable career paths taking active steps to show that they are ready for advancement and promotion (Ference, Stoner and Warren, 1977). While organizations are responsible for determining internal relations between jobs and developing people to move from one position to the next, professionals have to actively manage their careers and continuously acquire new skills (Nicholson, 1996). About one-half of the respondents to a survey of female executives reported that seeking out difficult and challenging assignments was one reason for their success (Ragins, Townsend and Mattis, 1998).

Transportation women affirm the importance of taking risks, of moving to new positions, particularly across the line manager/staff manager divide. When I ask them to discuss the critical incidents of their professional life, they always mention an episode where they tried to learn new skills. One woman justified her decision to leave project management of bus facilities and move to rail by saying, “Every five years you should make turns and learn.” Another said that after she learns a job she always asks herself, “What’s the next challenge?” A third respondent explained her decision to take a job as chief engineer at an authority rather than assistant commissioner at a DOT by saying that she could learn more in the first position. Two women told me they took pay cuts to move from policy to operating jobs. Both people called this strategy “moving down to move up,” and both eventually did use new more technical, operating skills to move into higher-level posts.
Sometimes making an unusual lateral transfer also gives an employee useful visibility. A DOT planning engineer left her technical position to answer citizen inquiries in the commissioner’s office. She remembers the surprise of colleagues at her shift which she believes jump-started her career. Because she lost her tag as “assistant engineer-planning,” an assistant commissioner offered her a position as executive assistant for interagency cooperation; this offer led to a job as manager of a DOT interagency cooperation bureau. Had she remained one engineer among many, the assistant commissioner would not have thought to offer her the executive assistant slot.

At one point, many people believed that success was most likely to come to employees who spent their entire career in one organization. Such employees were likely to increase the worth of their human capital because they gained experience with one organization’s needs (Kalleberg, 1988). Today, however, evidence is accumulating that many of the best careers are “protean” rather than organization driven with people moving in and out of organizations to acquire specific abilities (Hall, 1996). Bullard and Wright (1993) suggest that lateral moves between organizations are part of the career path chosen by most state agency executives.

Many of the women I interviewed started their career with an exploration period that included a variety of short-term jobs outside transportation. For three married women with small children this exploration time included volunteer work relating to conservation or transportation issues. Transition to transportation came at different times on the career trajectory for different individuals. Seven of the women entered transportation agencies at low to intermediate positions; three of the women entered at relatively high positions (e.g., the assistant commissioner level).
Most of the women soon established a set of geographically proximate agencies (e.g., New Jersey DOT and New Jersey Transit) in which the bulk of their career trajectories occurred. As mentioned earlier, one reason these women were ready to move within or between agencies was to learn new skills. As they climbed career ladders, some of them also had to change jobs for political reasons. Elections brought in new governors or agency heads from different parties.

Not all position shifts were at the state level. Several of the most successful women moved between the United States Department of Transportation and state agencies. Four of the women (including the two who attained the most responsible state-level positions) went into the private sector for a portion of their careers. Women moved between government levels and in-and-out of the public sector itself when they considered such moves useful.

Most of the women entered transportation in staff jobs rather than in operations. Over the years, they worked to gain operating experience but for some women a line placement only came after several years of trying to secure one. In the 1970s and 1980s, staff placements may have reflected a reluctance to put women in line jobs.

**Mentors**

The management literature contains ample evidence that mentors facilitate successful organizational careers. Surveys of businesspeople show that those respondents who report that they had mentors tend to have higher incomes and more promotions than those who lacked mentors (Dreher and Ash, 1990; Fagenson, 1989). Over a third of the respondents in a survey of female executives at large companies, cited mentoring as a reason for their success (Ragins, Townsend and Mattis, 1998).
Mentors teach organizational skills and values and publicize protege accomplishments. Mentors provide many forms of career and social support including teaching, guiding, advising, counseling, sponsoring, role modeling, validating, motivating, protecting, and communicating (Henderson, 1985). Some commentators speculate that female mentors are particularly important for female proteges for whom they serve as role models (Hale, 1992; Ragins and Cotton, 1993). One source argues, however, that women in male-dominated organizations also need male advisors because men are privy to the informal workings of the old-boy network in a way few women are (Committee on the Status of Women in the Profession, 2001).

Eight of the women interviewed had mentors. When asked to name mentors, these women gave from one to seven replies, almost always people who had been their superiors in early jobs. One valuable support these advisors gave was encouragement—particularly encouragement to take risks and possibly make mistakes. A New Jersey Transit manager, for example, remembers positively how an early supervisor assigned her to a difficult project creating a second express bus lane to New York. He watched her the first few weeks then gave her a lot of leeway to negotiate leases. His faith in her ability propelled her to do good work. A second woman reports that the manager who hired her at the United States DOT encouraged her to be aggressive. Another woman from New Jersey Transit characterizes her mentors as the people who pushed her to jump off the diving board.

The majority of mentors were male, a circumstance one would expect in the male-dominated transportation field. Only four women reported having any female mentors. These female advisors tended to be peers with somewhat more experience rather than
supervisors. One respondent who worked for a woman on her first job noted that it was wonderful to have a female guide who could model how successful women should behave in the transportation arena.

Professional Networks Outside the Organization

Professional networks have instrumental and expressive functions for participants (Ibarra, 1993). Networking correlates with managerial success as evidenced by fast promotions; successful managers spend more time interacting with outsiders than their less successful peers (Luthans, Rosenkranz and Hennessey, 1985). Since women may lack access to in-house networks (Ibarra, 1993), their need may be particularly acute for outside professional associations where they can learn skills and gain encouragement.

All of the interviewed women noted the importance of outside professional associations. At the start of their careers, associations served as a locus for learning skills and bringing people into contact with others. As careers progressed, associations gave women recognition and attendant visibility through their yearly awards.

The most frequently cited organization was the Women’s Transportation Seminar (WTS). This organization is seen as key for exchanging ideas and hearing stories about other women’s accomplishments. It affirms participants’ identities as professional women and gives members a chance to present ideas to a national audience and hold leadership positions. One person said, “I would never be here today if I didn’t have its leadership opportunities.”

A second organization that was mentioned as supportive by several women is the American Public Transportation Association (APTA). One woman praised its leadership program. When the organization selected her as one of 25 professionals to attend the
program, she made 24 friends and gained visibility in APTA. Her comment highlights the
year-round nature of networking contacts that are often maintained through telephone and
e-mail.

Several women noted that employer cutbacks restricted their participation in
professional networks. If agencies reduced reimbursement for association membership or
travel, women sometimes reduced participation in a group such as WTS even though they
believed participating benefited their development.

The problem was exacerbated when travel cutbacks occurred simultaneously with
downsizing that destroyed internal networking ability. In 1978, for example, women at
the Port Authority created an internal networking opportunity called “Women’s Equity”
which offered training programs and raised the visibility of gender issues. During 1995
downsizing, the leaders of the group left and the organization died. Women at the Port
Authority had to deal with loss of internal networking opportunities and curtailment on
travel at the same time. The agency blocked opportunities to learn from women either
inside or outside the organization.

**Gender and Work**

Hale (1999) argues that it is important to understand how gender affects
perception and communication in concrete work situations. Her public-administrator
focus groups reveal that many women encounter gender stereotypes--e.g., the emotional
female--at work. Half the women in her groups had a sense of invisibility and isolation
and felt marginalized on the job. Hale’s analysis echoes Kanter’s (1977) argument that
gender affects how corporate men perceive female colleagues; these perceptions and the
realities underpinning them influence female careers.
All of the transportation women believed their gender had affected concrete work relations at some point during their careers. Two women endured blatant, overt sex discrimination and harassment. Other women simply observed that they were regarded with a sense of difference. One woman said that colleagues initially reacted as if they were encountering a talking dog when she started to speak; they were amazed that she could talk intelligently about transportation issues. Several women noted that they often had to establish credibility as they moved from job to job, rather than simply inheriting it with the new title. (Part of the problem may have stemmed from their lack of engineering degrees rather than gender.) The women found that the best antidotes to these annoyances were humor and doing the job well.

Far from being invisible, these women saw themselves as very visible in the male-dominated transportation world. This heightened visibility had positive and negative implications. Three women described their heightened visibility in positive terms. They believed that at least some administrators explicitly wanted to bring more women into senior positions. When a qualified woman was the only representative of her sex in a committee or board meeting, she had an excellent chance of getting an offer for a better position. One woman noted, however, that high-visibility meant women were kept to a higher standard. The women who succeeded were the ones who were able to stand the heightened scrutiny.

**Family Life**

Female state-agency managers are much less likely to be married or to have children than male managers at the same level (Johnson and Duerst-Lahti, 1992; Kelly and Newman, 2001; Moore, 1987). Among the women I interviewed, eight are married;
one is divorced and one is divorced and remarried. Five of the women are childless; one had her sole pregnancy after she was already managing a facility.

While marriage clearly influences these women’s lives and hence careers, it is hard to discern a particular direction to this influence. Marriage brought one woman from Washington, D.C. to New Jersey where she began her transportation career. For three women it facilitated a period of volunteer work. Several women noted that they were stronger because of their husband’s support. Two women said that at some points their husbands resented the time they put into work. (One of these women eventually got divorced and the other woman separated from her husband for awhile.) The impact of marriage on career decisions varies couple by couple.

The affect of childbearing and raising seems more clearly problematic in relation to career success. The traditional middle-class family ideal included a father who worked and a mother who stayed home and attended to the children. Successful careers are still based on a male model of as an unbroken string of advancements; they are not supposed to include periods when employees absent themselves for child care responsibilities (Schwartz, 1992).

Schwartz (1992) divides women into “career primary” and “career and family” categories. Career primary women make the same trades as men traditionally made in terms of careers versus child-care responsibilities; they do it either by remaining childless or by having someone else handle the day-to-day tasks of raising their children. Career and family women want to have careers while participating actively in day-to-day child care.
Transportation agencies seem to be able to promote outstanding career primary women to the highest levels. Scenarios for career and family women are more problematic. All the childless women interviewed said that it would have been much more difficult to have a career if they had had children when they were in their twenties. The major concern was time. Many women described transportation as a 24/7 job. Several women cited situations where they had to stay in the office until 7:30 or later. With such protracted hours they believed that being a mother would have been difficult at the early stages of their careers. Schwartz (1992, p. 398) calls women who want to have careers while participating actively in raising their children “a precious resource that has yet to be mined.” Transportation agencies are not mining this resource.

Analysis

The last decade was difficult for many DOTs and authorities in terms of reconciling diminishing staff resources and workloads. An era of downsizing and cost cutting may have had a particularly hard impact on female careers by restricting the resources available for networking and by exacerbating the heavy time demands transportation work requires, demands particularly difficult to fulfill for women with young children.

As agencies move to increase the number of women leaders, they must understand the experiences of professional women during this era so that they can create programs that address these women’s needs and support their contributions. State agencies have limited ability to make personnel decisions. To a greater or lesser extent they must follow directives from legislatures or state personnel boards. Yet some agency-initiated policies may increase recruiting, retaining and developing female administrators.
This section uses evidence from the careers of successful transportation women to suggest ways for recruiting, retaining and developing women.

**Education and Career Paths**

Previous efforts to attract women to transportation have focused on getting a more equal gender mix into civil engineering (e.g., Waggoner, 1995). The implicit assumption was that civil engineers become agency managers hence increasing the percentage of female civil engineers will eventually translate into a higher percentage of female transportation-agency leaders. While increasing a female presence in civil engineering is a key issue, an equally important front lies in attracting liberal-arts graduates to transportation. This relatively neglected recruitment effort requires convincing non-engineering majors that their problem-solving skills can yield successful careers. As one woman I interviewed notes, most transportation programs are recent additions to universities. Even where managers had engineering or planning backgrounds, they were often expected to learn the technical nuances of transportation on the job. What made these managers promotion material was their analytic and strategic skill, their ability to define issues in a way that agencies could deal with them. Such skill is fostered in many academic settings including liberal-arts programs.

Of course, part of the problem in recruiting liberal-arts graduates is convincing such people that transportation is a desirable career choice. A study of women in private transportation positions finds that they like the field’s intellectual challenges, excellent advancement opportunities and fast-paced environment (Johnson, McClure and Schneider, 1999). State agencies should stress these benefits in setting a wide disciplinary recruitment net. In addition, they have to stress that transportation has political and social
impacts. One woman I interviewed said that she shifted to transportation from another
government function because she recognized that transportation was a field where she
could have an impact on cities and the environment. Another woman chose transportation
because it links communities. More people have to see transportation as a social vocation.
For this shift to occur, the visibility of transportation as a career field must rise. This
would happen if undergraduate social science courses contained transportation cases in
addition to examples from fields such as health, social services or education. Schachter
(2001) urges DOT research bureaus to add policy projects to their research mix; one
benefit of this addition would be to draw a larger number of policy-oriented professors
into transportation’s orbit. These professors, in turn, would enhance the visibility of
transportation issues in social-science courses. (1)

Mentoring

Listening to successful transportation women spotlights why mentors matter. One
trend that emerges clearly from the interviews is the need for successful agency members
to take risks. Time and again mentors are praised as the people who encourage employees
to leave safe harbors and seek new jobs to get additional skills. These mentors provide
sorely needed, contagious faith in their protégé’s ability to succeed.

Although some agencies implement formal mentoring programs to expand the
number of new employees with advisors, such programs may not provide all the benefits
of traditional mentoring. Managers may lack a psychological connection to proteges.
One woman told me that “a mentor comes out of chemistry”; such chemistry would be
lacking in formal programs. Agencies should try to spur traditional relationships. This
effort would involve impressing on managers the benefits mentoring brings to the
organization and to their own careers in terms of connecting to the next generation and broadening interpersonal skills.

Female managers should be explicit targets of any campaign to increase mentoring. A survey in research and development firms finds that among male and female managers holding equal positions, men were more likely to serve as mentors (Ragins and Cotton, 1993). Although the women reported an equal intention to mentor, they perceived more difficulty in implementing their wishes because of a lack of time, a fear that they would be put in a bad light by a protégé’s failure or a belief that they were not qualified. Under any circumstances, transportation women are going to be more likely to have male rather than female mentors simply because of the gender imbalance at higher ranks in their agencies. So as not to exacerbate this discrepancy, agencies need to work hard to counter any perceptions women may have that mentoring could stall their own careers. One way of countering such perceptions is to have recognition programs for mentors and to make service as a mentor a criterion for promotion or pay raises.

**Networks**

Agencies should facilitate employee participation in professional networks. Most of the women considered professional conferences important for skill building and attaining national visibility. The small number of female role models in any single agency reinforces the need for women to participate in WTS functions where they can interact with successful female executives.

WTS trains women in role attributes that ultimately benefit agencies. For example, admission to WTS’ Leadership Initiative Professional Development Program is contingent on committing to serve as a mentor for new transportation women; such a
commitment helps agencies bring additional women into the mentoring process. Cutting back on agency assistance to attend WTS functions is an example of penny wise, pound foolish.

**Gender and Work**

Increasing the number of women in policy positions will eventually dim the heightened scrutiny that successful DOT and authority women undergo now. In the meantime what seems to occur is that the strongest women who can deal with the rigors of high visibility succeed while others do not. More widespread mentoring and network participation might give the others a chance to discuss their concerns and learn how peers handle them. In addition, agencies must be scrupulous in not reinforcing the perception that high-level transportation women constitute an anomaly. One precaution organizations can take is to scrutinize their own manuals to see that they are gender inclusive.

**Family Life**

The relatively high percentage of successful transportation women who do not have children suggests that agencies are missing out on the talents of people who become mothers before 35. A strategy that may enable them to engage more “career and family” women who need some flexibility for the years when they have small children at home is to consider flexible hours for jobs where this prerogative will not diminish job performance. Flexible hours can mean the right to do some work at home, part-time employment or job sharing. While these options may not be appropriate in all transportation jobs, some variant may be useful in selected situations.
Unfortunately, not all policies designed as family friendly actually alleviate a given working parent’s shortage of time. A study of federal workers finds that individual variants on these policies may improve work-family balance for people in one type of family while proving irrelevant or even counterproductive for employees facing different family demands (Saltzstein, Ting and Saltzstein, 2001). This policy area offers no one size fits all solution. Agencies interested in designing flexible work policies must consult with their own people to understand their particular circumstances.

**Recommendations**

State transportation agencies in the last decade produced a recurring theme of limited personnel and increased work (Alarid, Hood and Albright, 1999). After a period of downsizing, these agencies need to plan how to develop each employee they have. Of particular concern are efforts to develop women because they have traditionally been underrepresented as leaders. Using evidence from the careers of successful transportation women, this article has tried to suggest strategies for these efforts. Recommendations include:

1. Expand recruitment of liberal-arts graduates for transportation management posts. In such recruitment, explicitly relate transportation jobs to social concerns. Increase social science faculty and student awareness of how transportation issues impact on social functioning.

2. Facilitate mentoring. Recognize mentors and make mentoring a criterion for agency advancement.

3. Encourage employee participation in professional networks.
4. Scrutinize internal agency communications such as manuals to see that their language and vision are gender inclusive.

5. Offer variants on flexible scheduling where this strategy will not diminish job performance.

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NOTES

1. Although the 2001 American Political Science Association Annual Meeting’s public policy section featured panels on environmental, criminal-justice, welfare and school policy, it offered no panel on transportation issues. Such a panel will appear when more policy-oriented professors engage in transportation research.

REFERENCES

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